GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

94

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Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Latabase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq
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length: 2000000000
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1: /SIDS8/gcgdata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-252-828A-2
242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      July 12, 2001, 08:24:10 ; Search time 45.7 Seconds (without alignments) 54.389 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               412676 seqs, 60623988 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS8/gcgdata/geneseq/geneseqp/AA1980.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA1981.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA1981.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA1983.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA1983.DAT:*
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/SIDS8/gcgdata/geneseq/geneseqp/AA1987.DAT:*
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AAY52988
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AAY82218
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                                                                                                                                                                                                                                                                                                                                SUMMARIES
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Amino acids 308 to Human zona pelluci Human zona pelluci Cynomolgus Monkey Cynomolgus monkey M. cynomolgus zPC Monkey zona pelluc Cynomolgus monkey wonkey zona pelluc Cynomolgus monkey Human zP3. Homo s
                                                                                                                                                                                                                                                             Description
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| Bovine oocyte zona | 2 | 21 | 421 | 5 | 109 | 5 |
|--------------------|---------------|----|-----|----------|------|----|
| Bovine zona pelluc | | 21 | 421 | 5 | 109 | 4 |
| Bovine 2PC protein | 7 | 20 | 421 | <u>ب</u> | 109 | ω |
| | | 20 | 421 | 5 | .109 | 2 |
| zona p | 55 | 15 | 421 | 5 | 109 | Ξ |
| zona | 529 | 21 | 421 | 9. | 119 | Ö |
| ine zona | 52 | 21 | 421 | 9. | 119 | 39 |
| oocyt | 52 | 21 | 421 | 9. | 119 | 8 |
| zona pell | Ņ | 21 | 421 | 9. | 119 | 37 |
| ZPC F | AAW81806 | 20 | 421 | 49.2 | 119 | 8 |
| zona | ž | 20 | 421 | 9. | 119 | ŭ |
| zona | 9 | 15 | 421 | 9. | 119 | 4 |
| zona pel | õ | 15 | 420 | 9. | 119 | ü |
| rtial porcine z | 5 | 15 | 258 | 9. | 119 | ະ |
| PZP-3. Su | Ξ | 14 | 258 | 9. | 119 | = |
| ouse ZP3 gene | | 11 | 424 | 2 | 126 | |
| eline zona | | 21 | 424 | ٥. | 136 | |
| eline zona pe | AAY52175 | 21 | 424 | 6. | 136 | 8 |
| line oocyt | | 21 | 424 | 6. | 136 | |
| eline zona | | 21 | 424 | ٥. | 136 | 8 |
| line ZPC p | | 20 | 424 | ٥. | 136 | |
| eline zona | | 20 | 424 | 6 | 136 | 24 |
| line zona | (n | 15 | 424 | 6 | 136 | ິລ |
| ine zona | | 15 | 424 | 6. | 137 | |
| ine zona | $\overline{}$ | 15 | 261 | 5 | 137 | 2 |
| Can | 3 | 15 | 426 | 7. | 140 | õ |
| zona | 5 | 21 | 426 | ۲ | 151 | 9 |
| zona | 52 | 21 | 426 | 62.4 | 151 | 8 |
| oocyt | 5 | 21 | 426 | Ñ | 151 | 7 |
| zona | 220 | 21 | 426 | 2 | 151 | 9 |
| ZPC p | 8180 | 20 | 426 | Ď. | 151 | տ |
| ğ | 42 | 20 | 426 | 2 | 151 | 4 |
| ona | 5519 | 15 | 426 | 62.4 | 151 | ω |
| Marmoset ZP3. Cal | 349 | 15 | 424 | 9. | 192 | ผ |
| | | | | | | |

ALIGNMENTS

AAY30214 standard; peptide;

41 B

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RESULT
ANAY30214
ID ANY
XX ANAY
XX O1-N
XX O1-N
XX O1-N
XX HUMB
KW HUMB
KW ACCC
XX HOMC
XX HOM
                                                                                      New recombinant human zona pellucida protein products for diagnostic and therapeutic use \boldsymbol{\imath} fertility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; zona pellucida protein 3; hZP3; glycoprotein; human spermatozoa; acrosome reaction; fertility; sperm motility; fertilization.
Claim 7; Fig 1; 35pp; English.
                                                                                                                                                                                                                                                                                WPI; 1999-527476/44.
                                                                                                                                                                                                                                                                                                                                                                  Dong K, Gibbons WE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-AUG-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amino acids 308 to 348 of human zona pellucida protein 3 (hZP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY30214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (EVIR-) EASTERN VIRGINIA MEDICAL SCHOOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0075079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US03273
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                                                                                                                                               related
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09-NOV-1992;
29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence represents amino acids 308 to 348 of human zona pellucida protein 3 (hZP3). The protein is a glycoprotein, and can strongly bind human spermatozoa and induce an acrosome reaction in the spermatozoa. The specification describes methods for producing recombinant hzp3. The protein can provide high levels of biologically active hzp3 of consistent quality for use in clinical and research chemistry, e.g. diagnostic and therapeutic use related to human fertility. The protein retains the ability to bind spermatozoa and induce the acrosome reaction. The hzp3 can be used to treat sperm to allow the sperm to respond more efficiently to motility and acrosome reaction regulators within the female reproductive tract and increase the rate
The present invention describes recombinant zona pellucida (ZP) proteins, specifically ZPC proteins. Also described are fusion proteins of ZPC with any of keyhole limpet haemocyanin, muramyl dipeptide, histidine tag, beta-galactosidase or palmitic acid, capable of stimulating mammalian antibodies that recognise mammalian ZPC. Recombinant ZPC proteins are used to immunise animals to induce transient infertility or permanent female sterility, in humans or other mammalian ARZ33243 to AAZ33254, AAZ33270 to AAZ33274 and AAZ33285 encode mammalian ZP proteins given in AAYS2971 to AAYS2988 from the present invention.

AAZ33255 to AAZ33269 and AAZ33275 to AAZ33284 represent oligonucleotides
                                                                                                                                                                                                  Disclosure; Column 153-156; 87pp; English
                                                                                                                                                                                                                                                                                                N-PSDB; AAZ33285
                                                                                                                                                                                                                                                                                                                 WPI; 2000-037080/03
                                                                                                                                                                                                                                                                                                                                                     Podolski JS,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human zona pellucida ZPC protein sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY52988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY52988 standard; Protein; 424 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of successful fertilization.
                                                                                                                                                                                                                                                          New recombinant mammalian zona pellucida C
                                                                                                                                                                                                                                                                                                                                                                                         (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zona pellucida;
                                                                                                                                                                                                                                          emale sterility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mmunocontraceptive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        swfpvqgpadicqccnkgdcgtpshsrrqphvmsqwsrsvs 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                     HSu KT,
                                                                                                                                                                                                                                                                                                                                                                                                                          93US-0149223.
92US-0973341.
93US-0012990.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZPA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Er
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contraception;
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                                                                                                                                                                                                                                                                                                                                                     Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 242; DB 20;
Pred. No. 8.6e-23;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                     JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infertility; sterility; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunisation.
                                                                                                                                                                                                                                                           proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
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                                                                                                                                                                                                                                                           for induction of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41;
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QΥ

SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS

Query Match Best Local Matches 3

38; Conservative

94.6%;

Score 229; DB 21; Pred. No. 2.8e-20; 1; Mismatches 2,

Length 372;

Indels

0;

Gaps

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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                       which consists of an isolated egg surface protein (e.g. ZP3) covalently linked to a glycosylated phosphatidylinositol moiety and having sperm binding activity. Antiserum comprising an antibody to an egg surface protein, can be prepared by recovering serum with the ability to bind antigen from an animal following immunisation with an immunogenic fragment of an egg surface protein. The antigenic molecule the antiserum, and an antibody against an egg surface protein can be used in methods for modulating fertility. The antibodies can be used in vaccination against fertilisation, sterilisation, diagnostic immunoassays, passive immunotherapy and generation of antiidotypic antibodies.
                                                                                                                                                                           This is the amino acid sequence of the human zona pellucida protein (2P3). ZP3 takes part in the primary binding between egg and sperm, during fertilisation. ZP3 binds to receptors on the sperm. The ZP3 protein is used in the invention, which relates to an antigenic molecule,
Sequence
                                                                                                                                                                                                                                                        Claim 6;
                                                                                                                                                                                                                                                                                     Antigenic molecule used in methods for modulating fertility
                                                                                                                                                                                                                                                                                                                  WPI; 2000-106016/09
N-PSDB; AAZ57790.
                                                                                                                                                                                                                                                                                                                                                               Herr JC,
                                                                                                                                                                                                                                                                                                                                                                                           (-IVYU)
                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9965520-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sterilisation; fertility modulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zona pellucida protein;
sperm receptor; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human zona pellucida protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY67287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY67287 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   308
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                                                                                                                                                                                                                                                                                                                                                                                             UNIV VIRGINIA PATENT FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 95.3
39; Conservative
                                                                                                                                                                                                                                                        Fig 12B; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                               Coonrod SA
 372 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      424 AA
                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0089950
                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US13858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein; ZP3; sperm receptor; antigenic molecule; sperm bir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97.1%;
95.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 235; DB Pred. No. 5.9e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ZP3) amino acid sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sperm binding factor;
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5.9e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fertilisation; antiserum;
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RESULT
AAR66552
ID AAR6
RESULT
AAY42483
CD AAY4
XX
AC AAY4
XX
DT 15-F
XX
DE Cyno
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 37; Conser
                             Cynomolgus monkey zona pellucida ZPC protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       porcine ZPA, ZPB and ZPC proteins. Positive clones were analysed further by Southern hybridisation using the porcine probes. Clones encoding cynomolgus monkey ZPA, ZPB and ZPC proteins were identified (see AAQ79680-Q79682). AAQ79682 is the insert from the largest partial ZPC clone which contains just over 50% of the C-terminal portion of the full-length sequence and contains an ORF of 672bp; AAR66552 is the amino acid sequence deduced from the ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   using mRNA isolated from a set of ovaries collected from monkeys aged 1.5 and 2 years and a second set from monkeys aged 3, 4 and years of age. The libraries were screened with probes encoding the collection of the collection of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Use of zona pellucida preproducible transient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-NOV-1992;
29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cynomolgus Monkey;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cynomolgus Monkey zona pellucida ZPC protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR66552 standard; Protein;
                                                                                    15-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAQ79682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1994-183156/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Harris JD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-MAY-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9411019-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Macaca cynomolgus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR66552;
                                                                                                                                                                                            AAY42483 standard; Protein; 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cynomolgus monkey cDNA libraries were constructed in lambda gtl0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 12; Page 132-133; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               female mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                          107
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HSu KT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92US-0973341.
93US-0012990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93WO-US10851.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 zona pellucida; ZPC; immunocontraception.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Podolski JS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proteins and t infertility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           223
                                                                                                                                                                                                                                                                                                                                                                                                                                                ü
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 226; DB 15;
Pred. No. 4e-20;
3; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antibodies - or permanent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for inducing sterility in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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AAW81820
ID AAW8
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                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-NOV-1993;
09-NOV-1992;
29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                       protein. The invention relates to the isolation of novel nucleotide sequences encoding zona pellucida proteins from mammalian, especially porcine, lapine, canine, feline, bovine, human or cynomolgus monkey sources. The zona pellucida proteins (ZPA, ZPB, and ZPC) are used in the induction of transient or permanent infertility. At present the method is used in veterinary applications to induce transient or permanent infertility in porcine, lapine, canine, feline, bovine,
                                                                 Key
Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contraceptive; porcine; pig; zona pellucida; mammal; lapine; canine; dog; rabbit; feline; cat; bovine; cow; human; cynomolgus monkey; ZPA ZPB; ZPC; infertility; veterinary.
                                                                                                                                                        M. cynomolgus ZPC protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents the cynomolgus monkey zona pellucida ZPC
17-NOV-1998
                    US5837497-A.
                                                                                                 Macaca cynomolgus
                                                                                                                         vaccine;
                                                                                                                                    ZPC; zona pellucida; infertility; sterility; immunocontraceptive;
                                                                                                                                                                                 29-JAN-1999
                                                                                                                                                                                                       AAW81820;
                                                                                                                                                                                                                              AAW81820 standard;
                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                and cynomolgus monkeys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 12; Column 143-146; 84pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        infertility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalian zona pellucida proteins used to induce transient or permanent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAZ22740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-633318/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Podolski JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1995;
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                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                  1 Similarity 90.3
                                                                                                                         monkey.
                                                                                                                                                                                                                                                                                                                                                                                          223 AA;
                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-0149223.
92US-0973341.
93US-0012990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hsu KT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95US-0484596
                                          /note=
                                                                            ocation/Qualifiers
                                                                                                                                                                                                                              Protein;
                                                                                                                                                                                                                                                                                                                                          93.4%;
                                          "Partial sequnence, no start codon given"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Harris JD;
                                                                                                                                                                                                                              223
                                                                                                                                                                                                                                                                                                                                  Ψ
                                                                                                                                                                                                                                                                                                                                             Score 226;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human; cynomolgus monkey; ZPA;
                                                                                                                                                                                                                                                                                                                                           4e-20;
                                                                                                                                                                                                                                                                                                                                                       DB 20;
                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                         223;
                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                  Gaps
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RESULT
AAY82218
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                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
Inducing reproducible transient or permanent infertility in a mammal comprises administration of homologous and/or heterologous mammalian species zona pellucida proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-NOV-1993;
09-NOV-1992;
29-JAN-1993;
07-JUN-1995;
                                                                                                                09-NOV-1992;
29-JAN-1993;
                                          N-PSDB;
                                                                        Podolski JS,
                                                                                          (ZONA-) ZONAGEN INC.
                                                                                                                                               09-NOV-1993;
                                                                                                                                                                   22-FEB-2000
                                                                                                                                                                                                                           Zona pellucida; ZPA; ZPB; ZPC; infertility; permanent sterility; vaccine; immunocontraceptive; contraceptive; immunostimulatory.
                                                                                                                                                                                                                                                            Monkey zona pellucida ZPC SEQ ID NO:49
                                                                                                                                                                                                                                                                                  12-JUN-2000
                                                                                                                                                                                                                                                                                                       AAY82218;
                                                                                                                                                                                                                                                                                                                          AAY82218 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents a Macaca cynomolgus ZPC protein isol zona pellucida. This protein can be used in a method for specinducing transient infertility or permanent sterility in a he animal by selective vaccination with specific zona pellucida or immunocontraceptively active fragments.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated zona pellucida DNA from different mammals - products which can be used for vaccination to induce infertility or permanent sterility in female mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 12; Column 145-148; 84pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                               7
                                          2000-269144/23.
)B; AAZ95677.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1999-023447/02.
DB; AAV64820.
                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       223
                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                               (first entry)
                                                                        HSu KT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93US-0149223.
92US-0973341.
93US-0012990.
95US-0484993.
                                                                                                               92US-0973341
93US-0012990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA;
                                                                                                                                             93US-0149223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95US-0484993
                                                                                                                                                                                                                                                                                                                          Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                             93.4%;
                                                                        Harris
                                                                                                                                                                                                                                                                                                                          223
                                                                                                                                                                                                                                                                                                                                                                                                                  ω,
                                                                                                                                                                                                                                                                                                                                                                                                                          Score 226; DB 2
Pred. No. 4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                         A
                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  used to develop transient
                                                                                                                                                                                                                                                                                                                                                                                                                                       223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n isolated from r specifically a host
                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteins
                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes a method for inducing reproducible CC transient infertility in a female mammal, including humans, by selective cd administration of homologous and/or heterologous mammalian species coma pellucida (ZP) proteins or immunocontraceptively active fragments. CC Also described are: (1) a method for inducing transient infertility in a cci mammal by administering directly an antibody directed to a ZPB or an immunologically active fragment selected from feline, bovine, cc cynomologous monkey or human ZPB polypeptides; (2) an isolated, purified creombinant feline, bovine, cynomologous monkey or human ZPB polypeptide cor immunologically active fragment; and (3) a fusion protein comprising a ZPB polypeptide which is conjugated with a compound selected from keyhole limpet haemocyanin, muramyl dipeptide, histidine-tag, beta-gal, cor palmitic acid where the fusion protein remains effective to stimulate production of antibodies that recognise a ZPB polypeptide. The method is useful for providing transient or permanent infertility or sterility in humans and animals. The present sequence represents monkey ZPC, which is cused in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                 09-NOV-1993;
09-NOV-1992;
29-JAN-1993;
                                                           Example 12; Columns 145-146;
                                                                                                                                        WPI; 2000-061880/05
                                                                                                                                                                      Podolski JS,
                                                                                                                                                                                                                                                                                                                               14-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                             US6001599-A.
                                                                                                                                                                                                                                                                                              02-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                     Zona pellucida; ZPA; ZPB; ZPC; purified; mammalian; glycoprotein; target; immunocontraception; vaccine; antibody; transient; infert controllable; predictable; permanent; sterility; side effect.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cynomolgus monkey oocyte zona pellucida protein ZPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-MAR-2000 (first entry)
                                                                                                                                                                                                    (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                         Macaca cynomolgus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY52692 standard; Protein; 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 12; Column 147-148; 85pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 Similarity 37; Conserv
                                                                                          transient sterility
                                                                                                       DNA encoding mammalian zona pellucida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       223 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                    Hsu KT,
                                                                                                                                                                                                                                93US-0149223.
92US-0973341.
93US-0012990.
                                                                                                                                                                                                                                                                                                95US-0458731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93.4%;
                                                                                                                                                                      Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω,
                                                        84pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 226; DB 2
Pred. No. 4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                       proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                         useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        223;
                                                                                                                                                                                                                                                                                                                                                                                                                                      infertility;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
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This sequence represents a mammalian zona pellucida protein, ZPC The zona pellucida is a complex matrix surrounding the mammalian cocyte, formed of glycoproteins secreted by ovarian cells. The

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RESULT
AAY52183
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
ZPA. The zona pellucida is a complex matrix surrounding the mammalian occyte, formed of glycoproteins secreted by ovarian cells. The previously mentioned ZPA proteins can be used to produce a fusion protein to stimulate production of antibodies in a mammal that recognize a ZPA polypeptide of the mammal. The ZPA polypeptides are useful as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polynucleotides encoding zona pellucida proteins from other mammalian species. Administration of zona pellucida proteins to a host animal results in a specific immunocontraceptive effect. Administration of purified ZPA and/or ZPB induces transient infertility in females. Fertility can be maintained in an on or off condition in a controllable/predictable fashion. Administration of ZPC induces permanent sterility. Use of a purified zona pellucida protein rather than a complex mixture of the protein controllable of the protein controllable.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention relates to zona pellucida proteins ZPA, ZPB and ZPC, which are useful as targets for immunocontraceptive vaccines. Polynucleotides encoding these proteins can be used for recombinant protein production, and as probes in hybridisation methods for the isolation of
                                                                                         sequences AAY52181-Y52183 are monkey zona pellucida proteins ZPA, ZPB, and ZPC. The invention relates to isolated and purified zona pellucida proteins from mammals, specifically canine, feline and bovine ZPA or their biologically active fragments also porcine and cynomolgus monkey
                                                                                                                                                                                                                                                                       WPI; 2000-022762/02.
N-PSDB; AAZ37824.
                                                                                                                                                                                                                                                                                                                                                                                                                09-NOV-1993;
09-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US5989550-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Monkey zona
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY52183;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY52183 standard; Protein; 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of zona pellucida proteins reduces the potential for unwanted side-effects which may be harmful.
                                                                                                                                                                                    Example 12; Column
                                                                                                                                                                                                                                     Isolated and purified mammalian zona pellucida
                                                                                                                                                                                                                                                                                                                          Podolski JS,
                                                                                                                                                                                                                                                                                                                                                             (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                               29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Macaca cynomolgus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fusion protein; vaccimmunocontraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zona pellucida protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            س
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      swfpvegpadicqccskgdcgtpshsrrqphvvsqwsrsas 147
                                                                                                                                                                                                                    of
                                                                                                                                                                                                                  immunocontraception
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    223 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pellucida protein C (ZPC) amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                        Hsu KT,
                                                                                                                                                                                                                                                                                                                                                                                             93US-0149223.
92US-0973341.
93US-0012990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95US-0480150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93.4%;
90.2%;
                                                                                                                                                                                                                                                                                                                            Harris JD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZPA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contraceptive;
                                                                                                                                                                              84pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZPB; ZPC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 226; DB 2
Pred. No. 4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                  English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oocyte; ovarian cell; antibody;
; fertilization; fertility;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                     proteins useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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$\times CCCCCCCCCCCCC\times D\times D\times P\times P\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
AAY52987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                               The present invention describes recombinant zona pellucida (ZP) proteins, specifically ZPC proteins. Also described are fusion proteins of ZPC with any of keyhole limpet haemocyanin, muramyl dipeptide, histidine tag, beta-galactosidase or palmitic acid, capable of stimulating mammalian antibodies that recognise mammalian ZPC stimulating mammalian antibodies that recognise mammalian ZPC infertility or permanent female sterility, in humans or other mammals. Infertility or permanent female sterility, in humans or other mammals. AAZ33243 to AAZ33254, AAZ33270 to AAZ33274 and AAZ33285 encode mammalian ZP proteins given in AAY52971 to AAX53988 from the present invention. AAZ333255 to AAZ333269 and AAZ33275 to AAZ33284 represent oligonucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vaccines for selectively effecting transient infertility in mammals. 21 has an important role in maintaining the occyte and in occyte-sperm interactions and so is a target for a contraceptive agent which interferes with the fertilization process. Providing a specific polypeptide reduces the need for a complex mixture of many ZP proteins which may create unwanted and harmful side effects. The duration of transient fertility is controllable and can be maintained in a
                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 14; Column 145-146; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US5976545-A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY52987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY52987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-NOV-1993;
09-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cynomolgus monkey zona pellucida ZPC protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                controllable and/or predictable fashion.
                                                       used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Podolski JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New recombinant mammalian zona pellucida C proteins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ZONA-) ZONAGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunocontraceptive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zona pellucida; ZPA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               emale sterility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-037080/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                          the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard; Protein; 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hsu KT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93US-0149223.
92US-0973341.
93US-0012990.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95US-0484158
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90.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contraception;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZPB; ZPC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
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Pred. No. 4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   infertility; sterility; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for induction of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      223;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΖP
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Sequence

223

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Query Match

DB 21;

Length 223;

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RESULT 12
AAR53498
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                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best
                                                                                                                                                                                                                             The protein sequence was deduced from the nucleotide sequence of zona pellucida ZP3 obtd. by screening a human genomic EMBL3 library with a labelled ZP3 probe. The human gene was found to comprise 8 exons spread over 20 kb genomic DNA. cDNA clones were isolated and expressed in CHO cells. Elucidation of the ZP3 sequence will allow prodn. of large amts. of the protein by recombinant techniques. The protein and derived polypeptides may be used to prep. an immunocontraception by either active or passive immunisation. The polypeptide and antibodies (and anti-idiotype antibodies) directed to it may be useful in diagnostic kits.
                                                                                                                                                                                                                                                                                                                                                                                                      Claim 3; Fig 2; 32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Human zona pellucida protein ZP3 and contraceptive vaccines or diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1992-096892/12.
N-PSDB; AAQ22997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR22239 standard;
                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ALKU ) AKZO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-AUG-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-AUG-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-MAR-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W09203548-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zona pellucida; antigenic; epitopes; fertillisation; gametes;
immunocontraception.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human ZP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-JUL-1992
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                                                          309 wfpvegpadicqccnkgdcgtpshsrrqphvmsqwstsas 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107 swfpvegpadicqccskgdcgtpshsrrqphvvsqwsrsas 147
                                                                                                                         Local Similarity
nes 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
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                                                                                          N
                                                                           WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 Similarity 37; Conserv
                                                                                                                                                                                                     372 AA;
                                                                                                                          Conservative
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                                                                                                                                      93.0%;
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90.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "antigenic epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     372
                                                                                                                       Score 225; DB 13;
Pred. No. 8.7e-20;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 226;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                     fragments - useful as medical kits
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.
                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                       372;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                         0;
                                                                                                                         Gaps
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RESULT 1
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                              Key
Protein
                                                                                                                                                                                                                                                                                                                                                                The marmoset ZP3 gene was isolated by PCR from total mamoset RNA using PCR primers corresp. to regions of the human ZP3 gene. ZP3 (the sperm receptor) is useful as an immunocontraceptive and as a diagnostic reagent e.g. to detect sperm function, to monitor the effects of vaccination, for imaging follicles, to detect ZP3-relation autoimmune disorders or ZP3-expressing tumours or to screen for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zona pellucida; glycoprotein 3; sperm receptor; immunocontraceptive;
diagnosis; tumour; autoimmune disease.
                                                                                                                                                                     AAR55199 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New polypeptide(s) with marmoset ZP3 activity - are useful as immuno-contraceptive vaccines and in diagnosis, also test system for contraceptive development
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Callithrix jucchus.
                                                               Canis familiaris
                                                                                    Dog; canine;
                                                                                                          Canine zona pellucida ZPC protein.
                                                                                                                               31-JAN-1995
                                                                                                                                                      AAR55199;
                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                       autoantibodies against ZP3.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 15; 27pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAQ63673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1994-167461/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (AKZU ) AKZO NOBEL NV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-MAY-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9410304-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Marmoset ZP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR53498 standard; Protein; 424 AA
                                                                                                                                                                                                                                  308
                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                     1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRS
                                                                                                                                                                                                                                swfpvegpadicqccskgdcgtpsharrqphvvslgsgs
                                                                                                                                                                                                                                                                                                                                   424 AA;
                                                                                                                                                                                                                                                                            Conservative
                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                     zona
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           92EP-0310026.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93WO-EP03014.
                    1..426
/label= canine_ZPC
                                        location/Qualifiers
                                                                                    pellucida;
                                                                                                                                                                                                                                                                                      79.3%;
                                                                                                                                                                            426
                                                                                     ZPC;
                                                                                                                                                                                                                                                                                      Score 192; DB 1
Pred. No. 1e-15;
                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                           AA.
                                                                                      immunocontraception
                                                                                                                                                                                                                                                                                                 DB 15;
                                                                                                                                                                                                                                                        39
                                                                                                                                                                                                                                                                            ω
''
                                                                                                                                                                                                                                                                                                 Length 424;
                                                                                                                                                                                                                                                                                                                                                                              detect ZP3-related
                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                              ZP3
                                                                                                                                                                                                                                                                                                                                                                                                     ø
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W09411019-A

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06-NOV-1993;

93WO-US10851.

26-MAY-1994.

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AAE42472
ID AAY4
XX AAY
AC AAY4
AC AAY4
AC AAY4
AC CAN
EW CON
KW CON
KW CON
KW CON
KW CON
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                          09-NOV-1993;
09-NOV-1992;
29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A commercially available 16 week old canine ovarian cDNA expression library in lambda gtl1 was screened using antibodies raised against heat solubilised canine zona pellucida. The largest candidate clone was used to rescreen the library and to isolate clones which were used as probes in Southern hybridisations. Sequences coding for canine ZPA and ZPC proteins were obtained (AAQ65608 and AAQ65609, respectively). AAR55199 is the deduced amino acid sequence for ZPC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Canis familiaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contraceptive; porcine; pig; zona pellucida; mammal; lapine; canine; dog; rabbit; feline; cat; bovine; cow; human; cynomolgus monkey; ZPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY42472 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 40; Page 92-93; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Use of zona pellucida proteins and antibodies - for inducing reproducible transient infertility or permanent sterility in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1994-183156/22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-NOV-1992;
29-JAN-1993;
WPI; 1999-633318/54
N-PSDB; AAZ22714.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dog; rabbit; feline; cat; bovine;
ZPB; ZPC; infertility; veterinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Canine zona pellucida ZPC protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY42472;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                       07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                         09-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                            US5981228-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               female mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ZONA-) ZONAGEN INC
                                                                                      Podolski JS,
                                                                                                                                        (ZONA-) ZONAGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            307 wypvegsadicrccnkgscglpgrsrrlshlergwrksvs 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 WEPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAQ65609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         426 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                         Hsu KT,
                                                                                                                                                                                          93US-0149223.
92US-0973341.
93US-0012990.
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93US-0012990.
                                                                                                                                                                                                                                                                                                       95US-0484596.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Podolski JS
                                                                                         Harris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 151; DB 15;
Pred. No. 1e-10;
""smatches 11;
                                                                                         Į,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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AAW81809
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                                                                                                                                                                                                     Query Match
Best Local S
Matches 24
                                                                                                                                                                                                                             zona pellucida proteins from mammalian, especially porcine, lapine, canine, feline, bovine, human or cynomolgus monkey sources. The zona pellucida proteins (ZPA, ZPB, and ZPC) are used in the induction of transient or permanent infertility. At present the method is used in veterinary applications to induce transient or permanent infertility in porcine, lapine, canine, feline, bovine, and cynomolgus monkeys.
                                                                                                                                                                                                                                                                                                                                                                                                 Mammalian zona pellucida proteins used to infertility -
AAW81809
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                     This sequence represents the canine zona pellucida ZPC protein. The invention relates to the isolation of novel nucleotide sequences encoding
                                                                                                                                                                                                                                                                                                                                                                Example 3; Column 73-76; 84pp;
                                                                                                                                                                                                                                                                                                                                                                                              infertility
                                                                  15
                                                                                                                                          Similarity
standard;
                                                                                                                                                                                                     426 AA;
                                                                                                                            Conservative
Protein;
                                                                                                                                          62.4%;
426
                                                                                                                                           Score 151; DB 2
Pred. No. 1e-10;
                                                                                                                                                                                                                                                                                                                                                                 English.
A
                                                                                                                              Mismatches
                                                                                                                                                         DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                            induce transient or permanent
                                                                                                                              11;
                                                                                                                                                         Length 426;
                                                                                                                              Indels
                                                                                                                              0;
                                                                                                                              Gaps
                                                                                                                              0,
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09-NOV-1993;
09-NOV-1992;
29-JAN-1993;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Canine ZPC protein
Isolated zona pellucida DNA from different mammals - used to d products which can be used for vaccination to induce transient infertility or permanent sterility in female mammals.
                                                                              WPI; 1999-023447/02.
N-PSDB; AAV64791.
                                                                                                                                          Harris
                                                                                                                                                                                                                                                                                                                        07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                               17-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                      US5837497-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZPC; zona pellucida; infertility; sterility; immunocontraceptive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW81809;
                                                                                                                                                                               (ZONA-) ZONAGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     canine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                    93US-0149223.
92US-0973341.
93US-0012990.
95US-0484993.
                                                                                                                                                                                                                                                                                                                      95US-0484993.
                                         used to develop
```

This sequence represents a canine ZPC protein isolated from zona pellucida. This protein can be used in a method for specifically inducing transient infertility or permanent sterility in a host animal by selective vaccination with specific zona pellucida prof

proteins

Claim 5; Column 78-80; 84pp; English.

or immunocontraceptively active fragments

Sequence

426 AA;

| Search completed: July 12, 2001, 08:25:05 Job time: 55 sec | 2 WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41 : : : : : | Query Match 62.4%; Score 151; DB 20; Length 426; Best Local Similarity 60.0%; Pred. No. 1e-10; Matches 24; Conservative 5; Mismatches 11; Indels 0; Gaps 0; |
|--|--|---|
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Result
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
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length: 2000000000
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Match Length
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1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*
July 12, 2001, 08:24:10; Search time 24.08 Seconds (without alignments) 34.299 Million cell up
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Gapop 10.0 ,
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242
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                     US-08-149-223A-49
US-08-484-993B-12
US-08-484-158B-12
US-08-484-1595-12
US-08-486-731-12
US-08-486-731-12
US-08-484-993B-18
US-08-484-993B-18
US-08-484-596A-18
US-08-484-596A-18
US-08-484-596A-18
US-08-484-596A-18
US-08-484-596A-18
US-08-484-731-18
US-08-458-731-18
US-08-458-731-18
US-08-458-731-18
US-08-458-731-18
US-08-458-731-18
US-08-458-731-18
                                                                                                                                                                                                                  US-08-484-158B-61

US-08-484-993B-49

US-08-484-158B-49

US-08-484-156A-49

US-08-480-150A-49

US-08-458-731-49
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Sequence
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| 100 | 100 | 100 | 100 | 100 | 109 | 109 | 109 | 109 | 109 | 109 | 119 | 119 | 119 | 119 | 119 | 119 | 126 |
| 41.3 | 41.3 | 41.3 | | 41.3 | | | | | 45.0 | | | | | | | | |
| . 415 | 415 | 415 | 415 | 415 | 421 | 421 | 421 | 421 | 421 | 421 | 421 | 421 | 421 | 421 | 421 | 421 | 424 |
| ω | N | N | Ŋ | N | w | ω | Ν | N | N | N | ω | w | N | N | N | N | 2 |
| US-08-458-731-8 | US-08-480-150A-8 | US-08-484-596A-8 | US-08-484-158B-8 | US-08-484-993B-8 | US-08-149-223A-24 | US-08-458-731-24 | US-08-480-150A-24 | US-08-484-596A-24 | US-08-484-158B-24 | US-08-484-993B-24 | US-08-149-223A-6 | US-08-458-731-6 | US-08-480-150A-6 | US-08-484-596A-6 | US-08-484-158B-6 | US-08-484-993B-6 | US-08-862-903-8 |
| Sequence 8, Appli | Sequence 24, Appl | Sequence 24, Appl | Sequence 24, Appl | ` | Sequence 24, Appl | Sequence 24, Appl | Sequence 6, Appli | Sequence 8, Appli |

ALIGNMENTS

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US-08-453-472-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 7, Applic Patent No. 5626846
                                                                                                                                                                                                                                              APPLICATION UNMEER: US/08/453,472
ETILING DATE: 30-May-1995
CLASSIFICATION: 435
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION UDMEER: US 07/930,462
PRIOR APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY/ACENT INFORMATION:
NAME: DOROTHY R. AUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                          INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
TYPE: amino acid
STRANDEDNESS: sinc
TOPOLOGY: unknown
MOLECULE TYPE: prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                REGISTRATION NUMBER: 36,434
REFERENCE/DOCKET NUMBER: 20
TELECOMMULICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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                                                          LENGTH:
TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET:
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                                                                                                                                      421792
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                    unknown
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30-May-1995
N. //s
                                      single
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BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA
                                                                                                                  7 :
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ORIGINAL SOURCE:

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; IDENTIFICATION METHOD: ; OTHER INFORMATION: hu US-08-453-472-7
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                                                                                        TELEX: 6714627 CUSH INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY_AGENT INFORMATION:
NAME: SCOTT, Watson T.
                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                              REFERENCE/DOCKET NUMBER: 26,581
REFERENCE/DOCKET NUMBER: 99;
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 861-3000
TELEPHONE: (202) 861-3000
                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HAPLOTYPE:
TISSUE TYPE:
                                                                                                                                                                                     NAME: SCOTT, Watson T. REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 20005-3918
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TOPOLOGY: 1
LECULE TYPE:
                             STRANDEDNESS:
                                                                                                                        TELEFAX:
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                                                         LENGTH:
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                                          amino acid
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                                                                                                       6714627 CUSH
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                                                         424 amino acids
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                                                                                                                        (202) 822-0944
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              linear
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                        single
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95.18;
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Pred. No. 6.4e-21;
1; Mismatches 1
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US-08-453-952-7; Sequence 7, Applic; Patent No. 5672488
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                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
TELEX: 421792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 424
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 0: FILING DATE: 26-MAR-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
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                                                                                                                  ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                  FILING DATE: 12-JUN-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM: PC-DOC TRAPPUM
CELL TYPE:
                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 07 FILING DATE: 20-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/453,952
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 07/364,379 FILING DATE: 12-JUN-1989
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                              TISSUE TYPE:
                                             HAPLOTYPE:
                                                       INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
                                                                                                 ORGANISM:
                                                                                                                                             TOPOLOGY: unl
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                                                                                                                                                                                                                                                                                                                      DOROTHY R. AUTH
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                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345 PARK AVENUE
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                                                                                                                                          unknown
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95.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 08/038,948
                                                                                                                                                                                                                                                                                                                                                                                                         US 07/930,462
                                                                                                                                                                                                                                                                                                      36,434
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Pred. No. 6.4e-21;
1; Mismatches 1
                                                                                                                                                                                                                                                                                          2026-4032 US4
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NAME/KEY:

ZP3

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US-08-862-903-7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 20 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: DOROTHY R. AUTH
                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 26-MAR-1993
PRIOR APPLICATION UNDER: US 07/930,462
PRIOR APPLICATION WINDER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA: APPLICATION NUMBER: US
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MEDIUM TYPE: FLOPPY
                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
                                                               MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-SOFTWARE: WORDPERFECT 5.1
                                                                                        TYPE: amino acid
STRANDEDNESS: sin
TOPOLOGY: unknown
                                                                                                                                                                                                           TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 30 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 95.
                                                                                                                                                                                                                            TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
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                                              ORGANISM: human
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DEVELOPMENTAL STAGE:
               INDIVIDUAL ISOLATE
                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION
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NO. 5916768
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                                                                                                                                                 424
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                                                                                             unknown
                                                                                                                                                                                                             (212) 751-6849
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                                                                                                                                                                                                                            (212) 758-4800
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95.1%;
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BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA
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                                                                                                                                                                                                                                                                            36,434
                                                                                                                                                                              7:
                                                                                                                                                                                                                                                            2026-4032 US4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                  FILING DATA: 514
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: 08/1/
APPLICATION NUMBER: 08/1/
OP-NOV-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                 TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION: NAME: Clough, David W.
                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/
FILING DATE: 07-JUNE-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                       TELEPHONE: 312/474-6653
                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: ami
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                                                                                                                TELEPHONE: 312/474-0448
                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                  REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                    FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTIFICATION METHOD: OTHER INFORMATION: hu
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                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
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                                                                   ENGTH:
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                                                     amino acid
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                                                                      424 amino acids
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Podolski, Joseph S.
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                                          linear
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             protein
/desc =
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"deduced amino acid sequence of human ZPC"
                                                                                                                                                                                              David W
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95.1%;
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Pred. No. 6.4e-21;
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US-08-484-158B-61

В

Matches

Query Match

Local Similarity 39;

97.18; 95.18;

Score 235; DB 2; Length 424; Pred. No. 6.4e-21;

Mismatches

Indels

0;

Gaps

0;

Conservative

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RESULT 7
US-08-484-158B-49
· Sequence 49, Application US/08484158B
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                                                                                                                                                                                      Query Match
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TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:
                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION UNMER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION UNMER: 07/973,341
APPLICATION UNMER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: CLOUGH, DAVID W.
REGISTRATION NUMBER: 36,107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 49, Application US/08484993B
Patent No. 5837497
                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
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                                                                                      REFERENCE/DOCKET NUMBER: 31
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARRE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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APPLICANT:
                                                                                                                                                          Local Similarity les 37; Conserv
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ADDRESSEE: Marshall, O'Toole,
STREET: 6300 Sears Tower, 233
                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                        TELEPHONE: 312/474-0448
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 09-NO
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CITY: Chicago
STATE: Illinoi
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                                                                                                                                                                                                                                                                  amino acid
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Podolski,
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                                                                                                                                                                                                                                        protein
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                                                                                                                                                                93.4%;
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                                                                                                                                            Score 226; DB 2; Le
; Pred. No. 4.1e-20;
vicmatches 1;
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South Wacker Drive
                                                                                                                                                                         Length 223;
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US-08-484-596A-49
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                                                                                                                                        Sequence 49, Application Patent No. 5981228
GENERAL INFORMATION:
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Best Local (
            APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 223 amino acid
                                                                                              APPLICANT: Harris Ph.D., Jeffrey D. APPLICANT: Hsu, Kuang T. APPLICANT: Podolski, Joseph S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 5976545
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 09-NOV-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-93
PRIOR APPLICATION DATA:
O7/072 3/1
                                                                                                                                                                                                                                                 107 SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 147
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ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
PRIOR TOATTON NUMBER: 08/149,223
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SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                    1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
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TELEPHONE: 312/474-0448
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Clough, David W. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 08, FILING DATE: 09-NOV-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 09-NO
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STATE: Illino
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                                                                                                                                                                                                                                                                                                                           37;
                                                                                                                                                                                                                                                                                                                    Similarity 90.2
37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acid
                                                                                                                                                                         Application US/08484596A
E: Marshall, O'Toole, Gerstein, Murray & Borun
6300 Sears Tower, 233 South Wacker Drive
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60606-6402/
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SYSTEM: PC-DOS/MS-DOS
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90.2%;
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Pred. No. 4.1e-20;
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                                                                                                                                                                                                                                                                                                                                              Length 223;
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Chicago : Illinois

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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
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                                                                                     COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/1 FILING DATE: 11-NOV-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 07/97
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: 08/149,223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Harris Ph.D., Jeffrey D. APPLICANT: Hsu, Kuang T. APPLICANT: Podolski, Joseph S.
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MEDIUM TYPE: Floppy disk
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Chicago
                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Materials and Methods for Immunocontraception
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REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31
                                                      APPLICATION NUMBER: US/08/480,150A FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                      COUNTRY:
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 APPLICATION NUMBER:
                                      CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                       RY: 'United States of America 60606-6402
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Podolski, Jo
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00 Sears Tower, 233 South Wacker Drive
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US 08/149,223
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Pred. No. 4.1e-20;
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Best Local Similarity
Matches 37; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
APPLICATION UNMEER: US/08/458,731
FILING DATE: 09-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 09-NOV-1993
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                    FILING DATE: 29-JAN-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
NUMBER OF SEQUENCES: 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                              TELEPHONE: 312/474-6653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: Chicago
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TELEFAX: 25-3856
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 312/474-0448
                                                                                                                                                     APPLICATION NUMBER: 07/973,341 FILING DATE: 09-NOV-1992
                                                                                                                                                                                                     APPLICATION NUMBER: 08/0 FILING DATE: 29-JAN-1993
                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER:
                                TELEFAX:
                                                                                   REFERENCE/DOCKET NUMBER:
                                                                                                   NAME: Clough, David W. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                               60606-6402
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6300 Sears Tower, 233 South Wacker Drive
                              312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                               United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Harris Ph.D., Jeffrey
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09-NOV-1992
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                                                                                                                                                                                                                       08/012,990
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49:
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Pred. No. 4.1e-20;
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                                                                                                                                                                                                                                                                                                                           Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 223;
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US-08-149-223A-49
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                                                                  Matches
                                                                                              Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 37; Conserv
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                                                                                                                                                                                                                              TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/149,2
FILLING DATE: 09-NOV-1993
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
                                                                                                                                                       TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 312/474-6653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.25
107 SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acid:
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               1 SWEPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                              TELEFAX:
                                                                                                                                                                                                                                                                                                                    NAME: Clough, David W. REGISTRATION NUMBER:
                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM:
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                                                                  37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          κΥ: United States of America
60606-6402
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                                                                                                                                                                                                  223 amino acids
                                                                                                                                                                                                                                                            312/474-0448
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                                                               Conservative
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Podolski, J
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Harris Ph.D., Jeffrey D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                       acid
                                                                                                                                                      protein
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                                                                           93.4%;
90.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93.4%;
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                                                                                                                                                                                                                                                                                                                  36,107
                                                                          Score 226; DB 3; Pred. No. 4.1e-20;
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                                                                                        Length 223;
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                                                          Indels
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US-08-484-993B-12
                                                                                                                                                      Sequence 12, Application US/08484158B Patent No. 5976545
                                                                                                                                                  Patent No.
                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12,
Patent No. 5
                                                                                  APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 08/012
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                  CORRESPONDENCE ADDRESS:
                                                  TITLE OF INVENTION:
                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 31 TELECOMMUNICATION INFORMATION: 312/474-6653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                              307 WYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVS 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: Chicago
CITY: Chicago
TMATE: Illinois
TMNIted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FITLE OF INVENTION:
                                                                                                                                                                                                                                                                      2 WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41
                                                                                                                                                                                                                                                                                                                 Local Similarity 60. es 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Clough, David W. REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
GY: linear
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                                                                                              Hsu, Kuang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Marshall, O'Toole, Gerstein, Murray & 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                 Harris Ph.D., Jeffrey D.
                                                                                 Podolski,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       United States of America
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Podolski, Joseph S.
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 Marshall,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-NOV-1993
                                                               Pharmaceutical Compositions for
                                                                                                                                                                                                                                                                                                                               62.48;
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                                                Immunocontraception
                                                                                 Joseph S.
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O'Toole, Gerstein, Murray &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08/012,990
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                                                                                                                                                                                                                                                                                                                             Score 151; DB 2;
Pred. No. 7.5e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31745
                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                             Length 426;
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US-08-484-158B-12
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                                                                                                                                                                                                                                                        Sequence 12, Application US/08484596A
Patent NO. 5981228
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEPA: 312/474-0448
TELEZ: 25-3856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/149,223
FILING DATE: 09-NOV-93
             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-92
ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy disk
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LENGTH: 426 amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                          307 WYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVS 346
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/
FILING DATE: 07-JUNE-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                         COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              RY: United States of America 60606-6402
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                                                                                                                                                                E: Marshall, O'Toole, 6300 Sears Tower, 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      426 amino acids
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                                                                                                                                                                                                                                                                                             Harris Ph.D., Jeffrey D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
PatentIn Release #1.0, Version #1.25
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60.08;

    Joseph S.
    Materials and Methods for Immunocontraception

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South Wacker Drive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 12, Application US/08480150A Patent No. 5989550
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Best Local Similarity
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
                                             FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                 APPLICATION NUMBER: US 01
FILING DATE: 09-NOV-1993
APPLICATION NUMBER: 08/01
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                     CLASSIFICATION: 424 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 25-3856
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                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/484,596A
                                                                APPLICATION NUMBER: 07/973,341 FILING DATE: 09-NOV-1992
                                                                                                                                                                                                                                                                                                                                                             COUNTRY: United States of America ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
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                                                                                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
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REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                            Chicago
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amino acid
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TELEPHONE: 312/474-6653

TELEPHONE: 312/474-6653

TELEPAX: 312/474-0448

TELEPAX: 312/474-0448

TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LEUGH: 426 amino acids
TYPE: amino acids
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| GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd. OM protein - protein search, using sw model Run on: July 12, 2001, 08:24:10; Search time 41.53 Seconds (without alignments) 75.202 Million cell updat Title: US-09-252-828A-2 Perfect score: 242 Sequence: 1 SWFPVQGPADICQCCNKGDCTPSHSRRQPHVMSQWSRSVS 4 Storing table: BLOSUM62 Gapop 10.0, Gapext 0.5 Searched: 219241 seqs, 76174552 residues | GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd. ein search, using sw model July 12, 2001, 08:24:10 ; Search time 41.53 Seconds (without alignments) 75.202 Million cell updates/sec US-09-252-828A-2 242 1 SWFPVQGPADICQCCNKGDCTPSHSRRQPHVMSQWSRSVS 41 BLOSUM62 Gapop 10.0 , Gapext 0.5 219241 seqs, 76174552 residues |
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. PIR_68:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

SUMMARIES

| protein F1N21.16 [| Н96696 | N | 379 | 22.1 | ن ان | 29 |
|--------------------|--------|----|--------|-------|---------|---------------|
| hypothetical prote | C72508 | N | 351 | 22.1 | 53.5 | 28 |
| | JC5076 | N | 497 | • | | 27 |
| | A42170 | N | 494 | • | 54 | 26 |
| ō | A47236 | N | 477 | • | 54 | 25 |
| P21 protein - soyb | A33176 | N | 202 | • | 54 | 24 |
| ADAM 6 protein pre | I48101 | ພ | 735 | 22.5 | | 23 |
| egg membrane prote | S52847 | N | 424 | • | . 54.5 | 22 |
| AC133 antigen - hu | T09050 | 2 | 865 | • | | 21 |
| prominin - mouse | T08881 | N | 858 | ٠ | | 20 |
| | A45054 | 2 | 641 | | | 19 |
| serotonin receptor | JN0591 | N | 436 | • | 55.5 | 18 |
| Frizzled-1 protein | JE0337 | 2 | 647 | • | | 17 |
| leucyl-tRNA synthe | G81698 | N | 819 | 23.3 | 56.5 | 16 |
| otein | S78705 | N | 66 | • | 58 | 15 |
| Ig alpha chain C r | S09269 | N | 357 | • | 58.5 | 14 |
| desmoglein 3 precu | IJHUG3 | _ | 999 | 24.4 | 59 | 13 |
| zona pellucida gly | S35573 | N | 58 | 24.4 | 59 | 12 |
| hetical pu | в82720 | N | 99 | 25.0 | 60.5 | 11 |
| | B44365 | N | 44 | 40.5 | 98 | 10 |
| zona pellucida gly | S70401 | N | 415 | 41.3 | 100 | 9 |
| pellucida | S70402 | ட | 421 | | 109 | 80 |
| ð | S70433 | _ | 421 | 9. | 119 | 7 |
| ഹ | A30334 | ᆫ | 424 | ۲. | 126 | 6 |
| Ot | S70399 | ນ | 424 | σ. | 136 | 5 |
| q_1 | A60503 | سا | 422 | 59.1 | 143 | 4 |
| zona pellucida gly | S70396 | N | 426 | 62.4 | 151 | ω |
| - | A56844 | N | 210 | 89.7 | 217 | 2 |
| rm-binding gl | A36000 | _ | 424 | 97.1 | 235 | 1 |
| Description | ID | B | Length | Match | Score | No. |
| | | | | Query | ! | Result |
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RESULT 2
A56844
C:Species: Homo sapiens (man)
C:Species: 19-Oct-1995 #sequence_revision 19-Oct-1995 #text_change 05-Nov-1999

| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | ω ω | 32 | 31 | 30 |
|------------------|-------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 51.5 | 51.5 | 52 | 52.5 | 52.5 | 52.5 | 52.5 | 52.5 | 52.5 | 52.5 | 52.5 | 52.5 | 52.5 | 53 | 53 | 53.5 |
| 21.3 | 21.3 | 21.5 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.7 | 21.9 | 21.9 | 22.1 |
| 339 | 339 | 127 | 967 | 449 | 449 | 449 | 448 | 447 | 447 | 447 | 447 | 447 | 563 | 197 | 738 |
| 2 | N | N | N | N | N | N | N | N | N | ν | N | Ν | N | N | 2 |
| B72011 | F86614 | T08097 | F86214 | S21989 | S06724 | S08534 | S10507 | 866339 | JC1454 | JS0719 | S17434 | S39505 | T47520 | 146413 | T00343 |
| phenylalaninetRN | phenylalanyl tRNA | osmotin - sweet or . | protein T6D22.2 [i | translation elonga | | translation elonga | translation elonga | translation elonga | hypothetical prote | keratin KAP5.5 - s | hypothetical prote |

ALIGNMENTS

| Query Match 97.1%; Score 235; DB 1; Length 424; Best Local Similarity 95.1%; Pred. No. 1.2e-20; Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0; Qy 1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS 41 : : : : : : : : : : : : | A;Gene: GDB:ZP3A A;Gene: GDB:ZP3A A;Cross references: GDB:128007; OMIM:182889 A;Cross references: GDB:128007; OMIM:182889 A;Map position: 7pter-7qter C;Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology C;Keywords: glycoprotein; oocyte; receptor; sulfoprotein; transmembrane protein C;Keywords: glycoprotein; oocyte; receptor; sulfoprotein; transmembrane protein F;1-22/Domain: signal sequence #status predicted <sig> F;23-424/Product: sperm-binding glycoprotein ZP3 #status predicted <mat> F;33-424/Product: sperm-binding glycoprotein ZP3 #status predicted <mat> F;45-301/Domain: ZP domain homology <zph></zph></mat></mat></sig> | A;Title: Cloning and characterization of the human sperm receptor ligand ZP3: evidenc A;Reference number: A44365; MUID:93122771 A;Accession: A44365 A;Status: preliminary A;Molecule type: mRNA A;Residues: 329-370,'S',372-424 <van> A;Experimental source: ovary A;Note: sequence inconsistent with the nucleotide translation A;Note: sequence extracted from NCBI backbone (NCBIN:122391, NCBIP:122392) C;Comment: This sulfated glycoprotein in the zona pellucida of the oocyte is a recept C;Genetics:</van> | A. 87, 6014-6018, 1990 he mouse sperm receptor. MUID:90349545 04; GB:M35109; NID:g340491; PIDN:AAA61336.1; I | A36000 A36000 A36000 Sperm-binding glycoprotein ZP3 precursor - human N;Alternate names: sperm receptor ZP3; zona pellucida glycoprotein ZP3 C;Species: Homo sapiens (man) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999 C:Accession: A36000: A44365 |
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A; Residues: 1-422 < KIN>
A; Cross-references: GB:M63629
A; Otos: The authors translated the codon CAA for C; Comment: This sulfated glycoprotein in the zc C; Cysuperfamily: sperm-binding glycoprotein ZP3; C; Keywords: glycoprotein; cocyte C; Kypords: glycoprotein; cocyte C; Kypords: glycoprotein; cocyte C; Keywords: glycoprotein; cocyte C; Key
                                                                                                                                                                                                                                                                                                                                                                              A;Title: Genomic organization and polypeptide primary structure of A;Reference number: A60503; MUID:91078540
A;Accession: A60503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sperm-binding glycoprotein ZP3 precursor - golden hamster N;Alternate names: sperm receptor; Zona pellucida glycoprotein C;Species: Mesocricetus auratus (golden hamster) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Harris, J.D.; Hibler, D.W.; Fontenot, G
DNA Seq. 4, 361-93, 1994
A;Title: Cloning and characterization of :
A;Reference number: S70396; MUID:95143578
A;Accession: S70396
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C;Species: Canis lupus familiaris (dog)
C;Date: 28-Oct-1996 #sequence_revision
C;Accession: S70396
                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Kinloch, R.A.; Ruiz-Seiler, B.;
Dev. Biol. 142, 414-421, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Accession: A60503
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A;Molecule type: mRNA
A;Residues: 1-426 <HAR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomics 25, 354-359, 1995

A;Title: POM-ZP3, a bipartite transcript derived from human ZP3 and a POM121 homologue. A;Reference number: A55844; MUID:95309900

A;Accession: A56844
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R; Kipersztok, S.; Osawa, G.A.;
Genomics 25, 354-359, 1995
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A;Molecule type: mRNA
A;Residues: 1-210 <KIP>
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                                 Query Match
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   Local Similarity
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main: ZP domain
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36; Conserv
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   59.1%;
56.1%;
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60.0%;
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Pred. No. 9.7e-19;
2; Mismatches 3
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143; DB 1;
No. 1e-09;
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.2e-10;
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                          Length 422;
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R;Rosiere, T.K.; Wassarman, P.M.
Dev. Biol. 154, 309-317, 1992
A;Title: Identification of a region of mouse zona
A;Reference number: A48823; MUID:93050795
A;Accession: A48823
                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-423 < KIN>
A; Residues: 1-423 < KIN>
A; Cross-references: EMBL: X14376
A; Cross-references: EMBL: X14376
R; Kinloch, R.A.; Roller, R.J.; Fimiani, C.M.; Wassarman, Proc. Natl. Acad. Sci. U.S.A. 85, 6409-6413, 1988
A; Title: Primary structure of the mouse sperm receptor pc A; Reference number: A31232; MUID: 88320451
A; Accession: A31232
                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-152, 'E', 154-252, 'E'
                                                                                                                                                                                                                                                                                                                                                                                                                   R;Kinloch, R.A.; Wassarman, P.M.
Nucleic Acids Res. 17, 2861-2863, 1989
A;Title: Nucleotide sequence of the gene of A;Reference number: S04189; MUID:89240048
A;Accession: S04189
A;Status: translation not shown
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C;Species: Felis silvestris catus (domestic cat)
C;Date: 28-Oct-1996 #sequence_revision 27-Feb-1997
C;Accession: S70399
                                                                                                                       A; Cross-references: EMBL: J03851
                                                                                                                                                                                               A; Status: not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M20026; NID:g1663713; R;Kinloch, R.A.; Wassarman, P.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA; mRNA
A; Residues: 1-424 < RIN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: Molecular analysis of cDNA coding A; Reference number: A30334; MUID:88242926 A; Accession: A30334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Accession: A30334; S04189; A31232; R;Ringuette, M.J.; Chamberlin, M.E.; Dev. Biol. 127, 287-295, 1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N;Alternate names: sperm receptor; zona pellucida glycoprotein ZP3; ZP3 gly C;Species: Mus musculus (house mouse) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: EMBL:U05778; NID:g458272; PIDN:AAA74390.1; PID:g458273 C;Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology F;43-299/Domain: ZP domain homology <ZPH>
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A; Residues: 1-424 <HAR>
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A;Title: Cloning and characterization of zona pellucida genes and A;Reference number: S70396; MUID:95143578
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Best Local
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                                                pellucida glycoprotein mZP3 that
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C;Genetics:
A;Introns: 103/3; 143/2; 178/1; 239/2; 278/3; 309/2; 355/1
A;Introns: 103/3; 143/2; 178/1; 239/2; 278/3; 309/2; 355/1
C;Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
C;Keywords: glycoprotein; occyte; sulfoprotein; transmembrane protein
F;1-22/Domain: signal sequence #status predicted <SIG>
F;22/Domain: signal sequence #status predicted <MAT>
F;23-424/Product: sperm-binding glycoprotein ZP3 #status predicted <MAT>
F;45-302/Domain: ZP domain homology <ZPH>
F;45-302/Domain: ZP domain homology <ZPH>
F;146,304,327,330/Binding site: carbohydrate (Asn) (covalent) #status experimental
F;273/Binding site: carbohydrate (Asn) (covalent) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cona pellucida glycoprotein C - pig
@;Species: Sus scrofa domestica (domestic pig)
@;Species: Sus scrofa domestica (domestic pig)
@;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
@;Accession: S70433
@;Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu, K.T.; Yurewicz, E.C.; Sac
"NA Seq. 4, 361-393, 1994
"NA Seq. 4, 361-393, 1994
"NA Seq. 4, 361-393, 1994
"NA Title: Cloning and characterization of zona pellucida genes and cDNAs from
"NA" Title: Cloning and characterization of zona pellucida genes and cDNAs from
"NA" Title: Cloning and characterization of zona pellucida genes and cDNAs from
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                                                                                                                                                                                                                                                         R; Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu, K.T.; Yurewicz, E.C.; Sacco, A.G. DNA Seq. 4, 361-393, 1994
A; Title: Cloning and characterization of zona pellucida genes and cDNAs from a variety A; Reference number: S70396; MUID:95143578
A; Accession: S70402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
S70402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A:Molecule type: protein
A:Residues: 1-152,'E',154-252,'E',254-424 <ROS>
A:Experimental source: ovary
A;Cross-references: EMBL:U05775; NID:g458266; PIDN:AAA74385.1; PID:g458267
C;Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
F;44-300/Domain: ZP domain homology <ZPH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               zona pellucida glycoprotein C - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: S70402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-421 <HAR>
C:Superfamily: sperm-binding glycoprotein ZP3; ZP
F:44-300/Domain: ZP domain homology <ZPH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
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                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-421 <HAR>
                                                                                                                                                                                                                     A; Status: preliminary
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nes 22; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WFPVQGPADICQCCNKGDCGTPSHSRR 28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52.1%;
53.7%;
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Pred. No. 7.4e-07;
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Query Match

45.0%;

Score 109;

DB 1;

Length 421

A; Title:

The genome sequence of the plant pathogen Xylella fastidiosa

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A; Experimental source: ovary
A; Note: sequence extracted from NCBI backbone (NCBIN:123950, NCBIP:122393)
C; Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
C;Accession: B82720 R;anonymous, The Xylella fastidiosa Consortium of the Organization for Nucleotide Nature 406, 151-157, 2000
                                                                hypothetical protein XF1139 [imported] - Xylella fastidiosa (strain 9a5c) C;Species: Xylella fastidiosa C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary
A;Molecule type: nucleic acid
A;Residues: 1-44 <VAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: A44365; MUID:93122771
A;Accession: B44365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R; van Duin, M.; Polman, J.E.; Verkoelen, C.C.; Bunschoten, H.; Meyerink, J.H.; Olijve Genomics 14, 1064-1070, 1992

A; Title: Cloning and characterization of the human sperm receptor ligand ZP3: evidence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Homo sapiens (man)
C;Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 12-May-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:U05782; NID:g458280; PIDN:AAA74392.1; PID:g458281
C;Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
F;41-295/Domain: ZP domain homology <ZPH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-415 <HAR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R; Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu, K.T.; DNA Seq. 4, 361-393, 1994
A;Title: Cloning and characterization of zona pellucida A;Reference number: S70396; MUID:95143578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Oryctolagus cuniculus (domestic rabbit) C;Date: 28-Oct-1996 #sequence_revision 27-Feb-1997
                                                                                                                                         в82720
                                                                                                                                                              RESULT
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Best Local
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3; Mismatches 10;
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Pred. No. 0.00013;
                                                                                                                                                                                                                                                                                                                                                   Score 98; DB 2;
Pred. No. 4e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #text_change 20-Aug-1999
                                                                                                                                                                                                                                                                                                                                                                      Length 44;
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                        Seq
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R;Amagai,
Cell 67, 8
                                  desmoglein 3 precursor - human
N;Alternate names: pemphigus vulgaris antigen
C;Species: Homo sapiens (man)
C;Date: 30-Jun-1993 #sequence_revision 30-Jun-1993
C;Accession: A41088
                                                                                                                                                                  IJHUG3
                                                                                                                                                                                   RESULT 13
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R;Toepfer-Petersen, E.; Mann, K.; Calvete, J.J.
Biol. Chem. Hoppe-Seyler 374, 411-417, 1993
A;Title: Identification of porcine oncyte 55 kDa alpha and beta proteins within the zon: a pellucida proteins in different mammalian species.
A;Reference number: $35572; MUID:94030657
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Cross-references: GB:AE003949; GB:AE003849; NID:g9106088; PIDN:AAF83949.1; GSPDB:GN001
A; Experimental source: strain 9a5c
R; Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, R.; Aas-Neto, E.; Docena, C.; El-Docry, H.; Faccincani, A.P.; Ferreira, A.J.S.
as-Neto, E.; Docena, C.; El-Docry, H.; Faccincani, A.P.; Ferreira, A.J.S.
A; Sumbsitted to GenBank, June 2000
A; Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohm Chado, M.A.; Madeira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laigurahuthors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Marques, M.V.; Martins, F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri, D.A.; Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasak M.; Tsuhako, M.H.; Vallada, H.; Vallada, H.; Van Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silveira, R; Reference number: A59328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: protein A; Residues: 1-15;16-30;31-58 <TOE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Experimental source: ovary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                zona pellucida glycoprotein beta chain - pig (fragments)
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 20-May-1994 #sequence_revision 30-Jan-1998 #text_change 07-May-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                    ;Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology;Keywords: glycoprotein; oocyte; receptor;1-30/Domain: ZP domain homology (fragments) <ZPH>
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A; Note: for a comple
A; Accession: B82720
                                                                                                                                                                                                                                                                                                                                                 Matches
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A; Residues: 1-99 <SIM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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Best Local Similarity
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Note: for a complete list
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                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36 CRCAKK-HCGLPEHSRTFPNIPEQ 58
869-877,
                                                                                                                                                                                                                                                                                            2 WFPVQGPADICQC 14
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                                                                                                                                                                                                                                                  WSPVEGPAVICRO
                                                                                                                                                                                                                                                                                                                                     Similarity 69.3
9; Conservative
                 Klaus-Kovtun, V.;
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                                                                                                                                                                                                                                                  58
                                                                                                                                                                                                                                                                                                                                                           24.48; 69.28;
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45.8%;
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of authors se
              Stanley,
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                                                                                                                                                                                                                                                                                                                                                           Score 59; DB
Pred. No. 2.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 60.5; Pred. No. 2.1
3; Mismatches
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                                                   #text_change 22-Jun-1999
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protein YBR056w-a - yeast (Saccharomyces cerevisiae)
C:Species: Saccharomyces cerevisiae
C:Date: 15-Jan-1999 #sequence_revision 15-Jan-1999 #
C:Accession: S78705
                                      C; Accession: S787
R; Aljinovic, G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Superfamily: immunoglobulin C region; in C;Keywords: immunoglobulin F;142-208/Domain: immunoglobulin homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Accession: S09269
A;Status: not compared with conceptual translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: The IgA heavy-chain gene family in rabbit: cloning and A;Reference number: S09264; MUID:90076124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-357 <BUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R; Burnett, R.C.; Hanly, W.C.; Zhai, S.K.; Knight, K.L. EMBO J. 8, 4041-4047, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             If alpha chain C region - rabbit (fragment)
C;Species: OryCtoLagus cuniculus (domestic rabbit)
C;Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 16-Jul-1999
C;Accession: S09369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S09269
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;910-938/Domain: desmoglein repeat <DG1>
F;937-966/Domain: desmoglein repeat <DG2>
F;110,180,545/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Keywords: calcium binding; cell adhesion; duplication; glycoprotein; F;1-23/Domain: signal sequence #status predicted <SIG> F;24-49/Domain: propeptide #status predicted <PRO> F;50-999/Product: desmoglein homolog #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A:Cross-references: GDB:134030; OMIM:169615
A:Map position: 18q12.1-18q12.2
C:Superfamily: cadherin; cadherin repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Gene: GDB:DSG3
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A; Residues: 1-999 < AMA>
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Best Local
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11; Conservative
Pohl, F.M.; Pohl, Protein Sequence !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                         #sequence_revision 15-Jan-1999 #text_change 15-Jan-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.28;
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Pred. No. 10;
3; Mismatches
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                                      T.M.
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Pred. No.
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19;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 357;
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Database, August 1994

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A;Reference number: $45906
A;Accession: $78705
A;Status: preliminary
A;Status: preliminary
A;Colecule type: DNA
A;Residues: 1-66 <ALJ>
A;Cross-references: EMBL: $25925; MIPS: YBR056w-a
A;Experious: $25925; MIPS: YBR056w-a
A;Experi
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CM protein - protein search, using sw model
                                                                                           GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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Eun on: July 12, 2001, 08:24:10; Search time 10.02 Seconds (without alignments) 140.167 Million cell updates/sec

Title: Perfect score: Sequence: US-09-252-828A-2 242

SWFPVQGPADICQCCNKGDC.....TPSHSRRQPHVMSQWSRSVS 41

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 93435 seqs, 34255486 residues

Total number of hits satisfying chosen parameters: 93435

Minimum DB Maximum DB seq length: 0
seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_39:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 31 33 | 28 29 30 | 25 25 26 27 | 18 20 21 22 | 14 14 15 16 | 7. 10 11 12 | | Result |
|--|--|---|---|--|--|--|------------------|
| 2000 | | 55 55 55 55 55 55 55 55 55 55 55 55 55 | ,,,,,,, | 55 55 55 55 55 55 55 55 55 55 55 55 55 | 500123 | 235 229 226 192 151 | Score |
| 21.7 21.7 21.7 | 21.7 21.7 21.7 21.7 | 21.7 21.7 21.7 21.7 | 22.3 22.1 21.7 21.7 21.7 | 22.7 22.7 22.7 22.3 | 56.2 49.2 41.3 | 929347 | Query Match I |
| 449 449 449 | 447 447 448 | 447 447 447 447 | 477 338 447 447 | 436 865 867 202 477 | 424 424 421 421 415 999 | 424 424 424 426 422 | Length DB |
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| RHOP_MOUSE | IL1B_MOUSE | KRUC_SHEEP | SODC_CAUCR | ACH4_CHICK | IGF_MYXGL | NXLD_ACAAN | DNBI_HSV6Z | DNBI_HSV6U | TRYZ_DROER | TXW6_NAJNA | SYFA_CHLPN |
| Q61085 mus musculu | P10749 mus musculu | P26372 ovis aries | P20379 caulobacter | P09482 gallus gall | P22618 myxine glut | P34073 acanthophis | P52538 human herpe | P52338 human herpe | | | Q9z6r6 chlamydia p |

ALIGNMENTS

| TO MEET SESOLT | UMAN PRT; 424 A 21754; 1-MAY-1991 (Rel. 18, Created) 1-MAY-1991 (Rel. 18, Last sequence update 0-MAY-1991 (Rel. 39, Last annotation update 0-MAY-2000 (Rel. 39, Last sequence 0-MAY-200 |
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| i\$\$\$\$XX | Craniata; Vertebrata; Catarrhini; Hominidae; 582; |
| 2 2 3 | "Human homolog of the mouse sperm receptor."; Proc. Natl. Acad. Sci. U.S.A. 87:6014-6018(1990). [2] |
| 8 8 | SEQUENCE OF 329-424 FROM N.A. TISSUE=Ovary; |
| 2 2 2 | WEDLINE-93122771; PubMed-1478648; van Duin M., Polman J.E., Verkehen C.C., Bunschoten H., Meverink I.H., Olifve W., Aitken R.J.; |
| 4 4 | "Cloning and characterization of the human sperm receptor ligand ZP3: evidence for a second polymorphic allele with a different frequency |
| 25 23 | |
| ឥឥឥ | -I- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION. |
| ដដ | 1 AND ZP2 TO |
| 366 | 7 7 |
| ត់ឥត | - I- PIM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES I- SIMILARITY: CONTAINS 1 ZP DOMAIN. |
| 3888 | SWISS-PROT entry is copyright. It is produced through a collaborative wheen the Swiss Institute of Bioinformatics and the EMBL outstation on the Swiss Institute of Bioinformatics and the EMBL outstation on the Swiss Institute of Bioinformatics and the EMBL outstation on the Swiss Institute of Bioinformatics and the Emblance and the Swiss Institute of Bioinformatics and the Swiss Institute of Bioinformatics and the EMBL outstation of the Swiss Institute of Bioinformatics and the Bioinformatics and the Bioinformatics and |
| 388888 | the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch). |
| W R R R R R R R | EMBL; M60504; AAA61336.1; PIR; A36000; A36000. MIM; 182889; InterPro; IPR001507; Pfam; PF00100; zona_pellucida; 1. PRINTS; PR00023; zrpELLUCIDA. PROSITE; PS00682; ZP_DOMAIN; 1. Glycoprotein; Signal; Sulfatation; Sperm; Receptor; Transmembrane; |
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RESULT 2
ZP3B_HUMAN
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EMBL; A18567; CAA01398.1; -.
MIM; 195002; -.
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            Extracellular
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Q1-0CT-1994 (Rel. 30, Created)
Q1-0CT-1994 (Rel. 30, Last sequence update)
Q1-0CT-1994 (Rel. 30, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3B PRECURSOR
GLYCOPROTEIN ZP3B) (SPERM RECEPTOR) (ZP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in the Caucasian and Japanese populations.";
Genomics 14:1064-1070(1992).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=93122771; PubMed=1478648;
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Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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SUBBINIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY SUBCELLULAR LOCATION: EXTRACELLULAR MATRIX.

PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES.

SIMILARITY: CONTAINS 1 ZP DOMAIN.
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                                                                                                                                                                                                                               an email to license@isb-sib.ch).
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Sulfatation; Sperm; Receptor; Multigene family.
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PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; 1.
                                                                                                                                        entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                         the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
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P53785;
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O1-OCT-1996 (Rel. 34, Created)
O1-OCT-1996 (Rel. 34, Last sequence update)
O1-OCT-1996 (Rel. 39, Last annotation update)
30-MAY-2000 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR (ZONA PELLUCIDA ZONA PELLUCIDA PROTEIN C) (SPERM RECEPTOR) (ZI
                                                             Extracellular
                                                                     3lycoprotein;
                                                                                                      Pfam;
                                                                                                                     EMBL; x82639; CAA57961.1; -.
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SEQUENCE
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                            ZONA PELLUCIDA
EXTRACELLULAR
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Pred. No. 9.6e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZONA PELLUCIDA SPERM-BINDING PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AB78DB5311BE7B4A CRC64;
                                                                                                                                                                                                                              O-LINKED OLIGOSACCHARIDES
                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                             bonnet monkey (Macaca radiata)
                                                                                                                                                                    There are no res
                                                                  Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .6e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1;
                           (POTENTIAL).
                                    SPERM-BINDING PROTEIN 3A
                                                                                                                                                          Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 372;
                                                                 Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                          уd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL)
(POTENTIAL)
                                                                                                                                                                            restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RECEPTOR) (ZP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                          and
                                                                                                                                                                                        EMBL
                                                                                                                                                                    is
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                                                                                                                                                          for
                                                                                                                                                                                      collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                     outstation
                                                                                                                                                                                                                                                           ZP1
                                                                                                                                                                                                                                                                                                 FOR
                                                                                                                                                          n no way commercial
                                                                                                                                                                    00
00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3B
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F-5

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툸
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-1996 (Rel. 34, CIEALEU, 01-OCT-1996 (Rel. 34, Last sequence update) 30-MAY-2000 (Rel. 39, Last annotation update) 20NA PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR 20NA PELLUCIDA PROTEIN C) (SPECTIVE OPPORTEIN 2P3A) (ZONA PELLUCIDA PROTEIN C) (SPECTIVE OPPORTEIN 2P3A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                          the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Cloning, sequencing and oocyte-specific expression of the marmoset sperm receptor protein, ZP3.";
Zygote 1:93-101(1993).
-!- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Ovary;
MEDLINE-94363314; PubMed-8081814;
meallai-Koothan P., van Duin M., Aitken R.J.;
                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the SwIss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Callithrix sp. (Marmoset)
Eukaryota; Metazoa; Chord
                                                                                                                                                           PRINTS; PRO0023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                        +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Callithrix.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZP3A_CALSQ
P53786;
               CARBOHYD
                          CARBOHYD
                                                     NIAMOD
                                                                     DOMAIN
                                                                                 TRANSMEM
                                                                                                DOMAIN
                                                                                                            CHAIN
                                                                                                                        SIGNAL
                                                                                                                                    Extracellular matrix;
                                                                                                                                                  Glycoprotein;
                                                                                                                                                                                       InterPro; IPR001507; -.
Pfam; PF00100; zona_pellucida; 1.
                                                                                                                                                                                                                   EMBL; S71825; AAB31866.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO SPECIES-SPECIFICITY OF THE INSEMINATION.

SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY Z
                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION: TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SWFPVEGPADICQCCSKGDCGTPSHSRRQPHVVSQWSRSAS 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
37; Conserv
                                                                                                                                                                                                                                                                                                                                                                  SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             125
147
272
424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93.4%;
nilarity 90.2%;
Conservative
  23
388
409
425
125
147
180
272
                                                                                                                                                  Signa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
  22
424
387
408
424
424
307
125
147
180
272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
147
272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Platyrrhini; Callitrichidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47040
                                                                                                                                    Multigene
                                                                                                                                                Sulfatation; Sperm; Receptor; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ψ
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 226; DB 1; Pred. No. 2.5e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
; 3B41C4CFA3792331 CRC64;
                                          N-LINKED
                                                                  CYTOPLASMIC (POTENTIAL).
                                                                                           EXTRACELLULAR (POTENTIAL)
                                                                                POTENTIAL
                                                                                                            ZONA PELLUCIDA
                                                                                                                        POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                             I MEMBRANE PROTEIN. EXTRACELLULAR
                                                                                                                                    family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
GLCNAC...
GLCNAC...
GLCNAC...
GLCNAC...
                                                                                                           SPERM-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (SPERM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 424
                                       ن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ZONA PELLUCIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RECEPTOR) (ZP3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                            ZP1
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RESULT 5
ZP3_CANFA
 밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 32
                                                                                                                                                                                                                                                                                    DNA Seq.
          TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZP3_CANFA
P48831;
                                                                                         EMBL; U05780; AAA74387.1; -.
EMBL; D45070; BAA08098.1; -.
InterPro; IDR001507; -.
Pfam; PF00100; zona_pellucida;
PRINTS; PR00023; ZPELLUCIDA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA
                                                                                                                                                                                                                                                                                                                                                                                                                     "Cloning and characterization of zona a variety of mammalian species: the ZI
                                         CHAIN
                                                     SIGNAL
                                                                       PROSITE; PS00682; ZP_DOMAIN; 1. Glycoprotein; Signal; Sulfatation;
                                                                                                                                                           or send an email to license@isb-sib.ch).
                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation
                                                                                                                                                                                                                                               - ! - SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Ovary;
                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Sacco A.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=95143578; PubMed=7841460; Harris J.D., Hibler D.W., Fontenot G.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Ovary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelo
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Canis familiaris (Dog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZP3 OR ZPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    308
                                                                                                                                                                                                                                                                   PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                               MATRIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWEPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRS 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SWFPVEGPADICQCCSKGDCGTPSHARRQPHVVSLGSGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                  4:361-393(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424 AA;
 23
23
386
407
43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                               matrix;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
426
426
426
305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46809 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79.3%;
82.1%;
                                                               Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 192; DB Pred. No. 3.1e 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
 POTENTIAL.
CYTOPLASMIC
ZP.
                               ZONA PELLUCIDA EXTRACELLULAR (
                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1DACBD03026C2739
                                                                        Sperm;
                                                                                                                                                                                                                                                                                                                                                                                                                       ZPA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                                                                                                      pellucida genes and PA, ZPB and ZPC gene
                                                                                                                                                                                           There are no restrictions ng as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
.1e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                        Receptor; Transmembrane;
                                          SPERM-BINDING
                                                                                                                                                                                  Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                     K.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yurewicz
                                                                                                                                                                                  γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                       cDNAs from
families.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
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                                                                                                                                                                                   tor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                  (BY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LMESAU

ZP3_MESAU

ZP3_MESAU

STANDARD;

PRT;

422 AA.

P23491;

01-NOV-1991 (Rel. 20, Created)

01-FEB-1996 (Rel. 33, Last sequence update)

30-MAY-2000 (Rel. 33, Last annotation update)

ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCII ZONA PELLUCII (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                            TRANSMEM
                                                                  SIGNAL
                                                                                               PROSITE; PS00682; ZP_DOMAIN; 1
                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                  EMBL; M63629; AAA37079.1; -.
                                                                                                                                                                                                                                                                                                                              Kinloch R.A., Ruiz-Seller B., Wassarman P.M.;

"Genomic organization and polypeptide primary structure of zona

"Genomic organization and polypeptide primary structure of zona

pellucida glycoprotein hzp3, the hamster sperm receptor.";

10 Per. Biol. 142:414-421(1990).

11 FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR

SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE

SPECIES-SPECIFICITY OF THE INSEMINATION.

WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.

11 SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                         InterPro; IPR001507;
                                                                                         Ycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=91078540; PubMed=2257975;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mesocricetus auratus (Golden hamster).
Eukaryota, Metazoa, Chordata, Craniata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
CARBOHYD
CARBOHYD
CARBOHICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE SPECIFICITY: OOCYTES,
DEVELOPMENTAL STAGE: GROWING OOCYTES,
PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES,
SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                        PF00100; zona_pellucida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                             PR00023; ZPELLUCIDA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
            matrix.
1 22
23 422
23 386
87 407
08 422
                                                                                Signal; Sulfatation; Sperm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
145
244
227
307
343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
145
244
227
227
307
343
47367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62.4%;
60.0%;
POTENTIAL.

ZONA PELLUCIDA SPERM-BIND:
EXTRACELULAR (POTENTIAL)
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLCNAC...) (
N-LINKED (GLCNAC...) (
N-LINKED (GLCNAC...) (
L'>> P (IN REF. 2).
W -> S (IN REF. 2).
K -> R (IN REF. 2).
K -> R (IN REF. 2).
SH; BE5825A949DCA172 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 151; DE
Pred. No. 2.8e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Cricetinae;
                                                                           Receptor; Transmembrane;
                                        SPERM-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 426;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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(POTENTIAL).
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                                      PROTEIN
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Best Local S
Matches 23
riam; PFUULLO9; zona_pellucida; 1.
PRINTS; PRO0023; ZPELLUCIDA.
PROSITE; PS000682; ZP_DOMAIN; FALSE_NEG.
Glycoprotein; Signal; Sulfatation; Sper
Extracellular matrix; Multigene family.
                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its mon-profit institutions as long as its content is in no way entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                   EMBL; U05778;
EMBL; D45068;
                                                                                                                                                                                                                                                                OKAZAKI Y., Sugimoto M.;

Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).

-I- SUBCHIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY Z

-I- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULA
                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                     "Cloning and characterization of zona pellucida genes and a variety of mammalian species: the ZPA, ZPB and ZPC gene DNA Seq. 4:361-393(1994).
                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Ovary;
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=95143578; PubMed=7841460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FELCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sacco A.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; (Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZP3_FELCA STANDARD; PRT; 424 AA.
P48832;
01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZP3 OR ZPC.
Felis silvestris catus (Cat).
Felis silvestris catus (Cat).

Annivora; Fissipedia;
                                                "H. D45068; BAAD74390.1; --
"ECPTO; IPRO01507; --
"TS; pro0100; Zon"
"TS; pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
DOMAIN
DOMAIN
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                        SIMILARITY).
SIMILARITY: CONTAINS 1 ZP DOMAIN.
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                                                                                                                                                                                                                                                             PTM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 SWEPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWSPVEGDAEVCGCCSSGDCGSSSRSRYQAHGVSQWPKSAS 347
                                                                                                                                                                                                                                                       SULFATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ĀĄ;
                                                                                                                                                                                                                                           GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
158
257
146
271
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56.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
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Pred. No. 2.5e
7; Mismatches
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PRO-RICH.
PRO-RICH.
N-LINKED
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N-LINKED
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-LINKED (GLCNAC ...) (PC
-LINKED (GLCNAC ...) (PC
-D0F95BE7FF8E7E01 CRC64;
            Sperm;
         Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vertebrata; Euteleostomi;
ia; Felidae; Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
.5e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     K.T., Yurewicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
     Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 422;
                                                                                                                                                                                                                                                                       EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                              gene families.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E.C.,
                                                                                                                                                                                                                                                                                                                           TO
                                                                                                                                                                                                                                                                                    ZP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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RESULT E
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Best Local
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CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZP3_MOUSE
P10761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUL-1989 (Rel. 11, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA GLYCODROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
 Rosiere T.K., Wassarman P.M.;
"Identification of a region of mouse zona pellucida
that possesses sperm receptor activity.";
Dev. Biol. 154:309-317(1992).
-I- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS F
                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE=88320451;
                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                             "Primary structure of
by genomic cloning.";
                                                                                                                                                                                                                                         STRAIN=CD-1; TISSUE=Liver; MEDLINE=89240048; PubMed=2541416;
                                                                                                                                                                                                                                                                                    Submitted (NOV-1996)
                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=88242926; PubMed=3378665;
Ringuette M.J., Chamberlin M.E.,
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                         MEDLINE=93050795; PubMed=1330788;
                                                                      STRAIN=CD-1
                                                                               SEQUENCE OF 49-63; 197-204; 219-233
                                                                                                                                     Wassarman P.M.
                                                                                                                                                 Kinloch R.A.,
                                                                                                                                                                                              Nucleic
                                                                                                                                                                                                                             Kinloch R.A., Wassarman P.
                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                 Dean J
                                                                                                                                                                                                                                                                                                                                              of the mouse zona
                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                     Proc. Natl.
                                                                                                                                                                                                                   "Nucleotide sequence of the gene encoding
                                                                                                                                                                                                                                                                                                             REVISION TO
                                                                                                                                                                                                                                                                                                                                 Dev. Biol. 127:287-295(1988)
                                                                                                                                                                                                                                                                                                                                           "Molecular analysis of cDNA coding of the mouse zona pellucida:";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 WFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR ZP-3.
FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WFPVEGPADICNCCNKGSCGLQGRSWRLSHLDRPWHKMAS 346
                                                                                                                                                                                            the mouse sperm receptor.";
Acids Res. 17:2861-2863(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22; Conservative
                                                                                                                                                                                                                                                                                                             387.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1
23
23
384
405
405
123
145
72
                                                                                                    Acad.
                                                                                                                                                 Roller R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD
                                                                                                                                                          PubMed=2842770;
                                                                                                    Sci. U.S.A. 85:6409-6413(1988).
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424
424
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                                                                                                                                                                                                                                                                                      to the
                                                                                                                        the mouse sperm receptor polypeptide determined
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                                                                                                                                                Fimiani C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                     EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 136; DB Pred. No. 1.8e 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .) (...
N-LINKED (GLCNAC. . .) (POTENTIAL).
TUKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC. .
G -> W (IN REF. 2).
D -> Y (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZONA PELLUCIDA SPERM-BIND
EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CFC62F35F9AAFC0D CRC64;
                                                                                                                                                                                                                                                                                                                                                      Baur A.W.,
ing for ZP3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PELLUCIDA SPERM-BINDING
                                                                               AND 261-275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
.8e-09;
                                                                                                                                                Wassarman D.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                   zona
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a sperm bindin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                   pellucida glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 424;
\mathbf{s}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
 RESPONSIBLE
                                                                                                                                                                                                                                                                                                                                                       binding
                                 glycoprotein
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protein
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RESULT
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Best Local S
Matches 22
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CARBOHYD
SEQUENCE
                                                                                              01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
20NA PELLUCIDA SPERM-BINDING PROTEIN 3-BETA PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3-BETA) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                          ZP3_PIG
P42098;
                                                     Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00100; zona pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; 1.
Glycoprotein; Signal; Sulfatation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M20026; AAB18629.1; -. EMBL; X14376; CAA32550.1; -.
Yurewicz
          TISSUE=Ovary;
                      SEQUENCE FROM
                                   NCBI_TaxID=9823;
[1]
                                                                                      ZP3B OR ZPC
                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Extracellular matrix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE ? SPECIES-SPECIFICITY OF THE INSEMINATION.
SUBGUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, II WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEVELOPMENTAL STAGE: EXPRESSED DURING THE 2-WEEK GROWTH PH
OCGENESIS, PRIOR TO OVULATION
PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S04189;
A30334;
A31232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE SPECIFICITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGI:99215; Zp3
                                                                                                                                                                                                                                          SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                             SWLPVEGDADICDCCSHGNCSNSSSSQFQIHGPRQWSKLVS 349
                                                                                                                                                                                                                                                                         . Similarity
22; Conser
E.C., Hibler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR001507;
                                                                                                                                                                                                                                                                                                                                                                                                              388
409
                                                                                                                                                                                                                                                                                                                                424 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S04189.
                                                                                                                                                                                                                                                                         Conservative
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                     N.A.
                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                    22
424
408
408
424
424
308
146
307
307
                                                        Cetartiodactyla;
                                                                  Chordata;
                                                                                                                                                                                                                                                                                                                                46303
                                                                                                                                                                                                                                                                                    52.1%;
53.7%;
D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COCYTES
                                                                                                                                                                                                                                                                                                                                MW;
 Fontenot
                                                                                                                                                                                                                                                                        Score 126; DB Pred. No. 2.9e 5; Mismatches
                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                          N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                               ZONA PELLUCIDA SPERM-BINDING PROTEIN
                                                       Craniata; Vertebrata;
actyla; Suina; Suidae;
                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                9089903FBD268365
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sperm; Receptor; Transmembrane;
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D (GLCNAC...)
D (GLCNAC...)
D (GLCNAC...)
D (GLCNAC...)
                                                                                                                                                                      421
                                                                                                                                                                                                                                                                  DB 1,
2.9e-08;
14;
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                                                                                                                                                                      A
 Harris
                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND MAY CONTRIBUTE TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Usage
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                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                              Length 424;
                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and the
                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
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                                                        Euteleostomi; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
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                                                                                                                                                                                                                                                                         Gaps
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RESULT 10
ZP3_BD 2P3_B
ID ZP3_B
AC P4883
DT 01-FE
DT 30-MA
DE ZONA
DE GLYCO
GN ZP3 0
OS Bos t
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                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
            01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3B) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
                                                                                                                                                                 ZP3_BOVIN
P48830;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKAZAKI Y., Sugimoto M.;

OKAZAKI Y., Sugimoto M.;

Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECKA-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICTTY OF THE INSEMINATION (BY SIMILARITY).

-!- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Extracellular matrix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00100; zona_pellucida; 1. PRINTS; PR00023; ZPELLUCIDA. PROSITE; PS00682; ZP_DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; L22169; AAA31145.1; -. EMBL; D45065; BAA08093.1; -. GLycoSuiteDB; P42098; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001507; Pfam; PF00100; zona_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (JUL-1993)
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lycoprotein;
                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                            N
    taurus
                                                                                                                                                                                                                                                                                                                         WFPVQGPADICQCCNKGDCGTPSHSRR 28
                                                                                                                                                                                                                                                                                                     WSPVEGPAVICRCCHKGQCGTPSLSRK 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: OOCYTES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
(Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               404
421
                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΑĄ,
                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        381
402
421
306
124
146
179
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179
101
101
164
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421
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                                                                                                                                                                                                                                                                                                                                                                                                                        49.2%;
70.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sulfatation; Sperm;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (IN REF. 2).
D -> V (IN REF. 2).
D -> V (IN REF. 2).
VF -> GV (IN REF. 2).
P -> A (IN REF. 2).
P -> A (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 119; DB 1
Pred. No. 2e-07;
                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZONA PELLUCIDA SPERM-BINDING
                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                   421
                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Receptor; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                             4,
                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 421;
                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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RESULT 11
ZP3_RABIT
ID ZP3_RABIT
AC P48833;
        В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
ZP3 OR ZPC.
Oryctolagus
                                                  Ol-FEB-1996 (Rel. 33, Created)
Ol-FEB-1996 (Rel. 33, Last sequence update)
Ol-FEB-1996 (Rel. 33, Last annotation update)
Ol-FEB-1996 (Rel. 33, Last annotation update)
TONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA)
TONA PELLUCIDA SPERM-BINDING PROTEIN (ZONA PELLUCIDA PROTEIN C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glycoprotein; Signal; Sulfatation; Sperm; Extracellular matrix; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U05775; AAA74385.1; -. InterPro; IPR001507; -. Pfam; PF00100; zona_pellucida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a variety of mammalian species: the ZPA, ZPB and ZPC gene families. DNA Seq. 4:361-393(1994).

-i. FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILIARITY).

-i. SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP3 AND ZP3 COMPLEX INTO COPOLIMERS CROSS-LINKED BY ZP1.

-i. SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a continuous the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <del>:</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning and characterization of zona pellucida
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-95143578; PubMed=7841460; Harris J.D., Hibler D.W., Fonteno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyia; Ruminantia; Pecora; Bovoidea Bovidae; Bovinae; Bos. NCBI_TaxID-9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sacco A.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                   2 WFPVQGPADICQCCNKGDCGTPSHSRRQPH 31
                                                                                                                                                                                                                                                                                                                                                               WSPVEGPTDICRCCSKGRCGISGRSMRLSH 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity 56.7
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES (BY
cuniculus
                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
421
381
402
421
306
124
146
179
271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46545 MW;
(Rabbit)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fontenot G.K., Hsu K.T., Yurewicz E.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 109;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED (GLCNAC. . .) (POTENTIAL).
905C4722B7BA11DC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CYTOPLASMIC (POTENTIAL).
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                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .2e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Receptor; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 421;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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CCCCCCEPT BRANCOCCCCCEPT B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                             DSG3_HUMAN STANDARD,
DSG3_HUMAN STANDARD,
DSG3_HUMAN STANDARD,
DSG3_HUMAN STANDARD,
D32926;
D1-OCT-1993 (Rel. 27, Created)
D1-OCT-1993 (Rel. 27, Last sequence update)
D1-OCT-2000 (Rel. 40, Last annotation update)
D1-OCT-2000 (Rel. 27, Created)
D1-OCT-2000 (Rel. 27, Created)
D1-OCT-2000 (Rel. 27, Last sequence update)
D1-OCT-2000 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00100; zona_pellucida; 1.
PROSITE; PS00682; ZP_DOMAIN; 1.
Glycoprotein; Signal; Sulfatation;
Extracellular matrix; Multigene fan
                                 -I- FUNCTION: COMPONENT OF INTERCELLULAR DESMOSOME INVOLVED IN THE INVERACTION OF PLAQUE PROTEINS FILAMENTS MEDIATING CELL-CELL ADHESION.
-I- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
-I- TISSUE SPECIFICITY: EPIDERMIS, TONGUE, TONSIL,
                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                             JSG3.
HOmo sapiens (Human).
Homo sapiens (Human).
Thervota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U05782; AAA74392.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a variety of mammalian sp
DNA Seq. 4:361-393(1994).
                                                                                                                                Amagai M., Klaus-Kovtun V., Stanley J.R.;
"Autoantibodies against a novel epithelial cadherin vulgaris, a disease of cell adhesion.";
Cell 67:869-877(1991).
                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE=92069753; PubMed=1720352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001507;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Cloning and characterization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=95143578; PubMed=7841460;
Harris J.D., Hibler D.W., Fontenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
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CALCIUM MAY BE BOUND BY THE CADHERIN-LIKE REPEATS
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42.6%;
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EXTRACELLULAR (I
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5;
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No. 3.8e-05;
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; 77396CF1BAA3F5CB CRC64;
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                                                                                                                                                                                                                                                                                              Craniata; Vertebrata;
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
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                                                                                                                                                                                                                                                                                                Hominidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
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                                                                                               AND INTER
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                                     ESOPHAGUS AND
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                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transmembrane
                                                                                               INTERMEDIATE
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Best Local S
Matches 11
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MTM; 169615;
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SEQUENCE
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P31388;
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CARBOHYD
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DOMAIN
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DOMAIN
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PROSITE; PS00232; CADHERIN_1;
Cell adhesion; Signal; Transmc
Calcium-Firati-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
Monsma F.J. Jr., Shen Y., Ward R.P., Hamblin "Cloning and expression of a novel serotonin affinity for tricyclic psychotropic drugs.";
                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                               01-JUL-1993 (Rel. 26,
01-NOV-1995 (Rel. 32,
15-DEC-1998 (Rel. 37,
5-HYDROXYTRYPTAMINE 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
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                                     STRAIN=SPRAGUE-DAWLEY;
MEDLINE=93196608; PubM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REPEAT
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                                                               SEQUENCE FROM N.A.
                                                                                     NCBI_TaxID=10116;
                                                                                                                                                    (ST-B17).
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DISEASE: PEWPHIGUS VULGARIS (PV) IS A POTENTIALLY LETHAL SKIN DISEASE: NHICH EPIDERMAL BLISTERS OCCUR AS THE RESULT OF THE LOSS OF CELL-CELL ADHESION CAUSED BY THE ACTION OF AUTOANTIBODIES AGAINST DSG3.

SIMILARITY: BELONGS TO THE CADHERIN FAMILY. DESMOSOMAL SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P09803; 1EDH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                    Similarity
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641
                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Repeat.
                                      PubMed=7680751;
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                                                                                                                                                                                                                                                                                                                                                    24.48;
39.38;
                                                                                                                                                            Last sequence update)
Last annotation update)
RECEPTOR (5-HT-6) (SEROTONIN
                                                                                                                                                                                                   Created)
                                                 TISSUE=Striatum;
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                                                                                                                                                                                                                                                                                                                                                                                                      MW.
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DESMOGLEIN REPEAT 2.
N-LINKED (GLCNAC. .) (POTI
N-G0479DD46AC219A1 CRC64;
                                                                                                                                                                                                                                                                                                                                       Score 59; DB Pred. No. 7; 4; Mismatches
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CADHERIN 3.
CADHERIN 4.
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EXTRACELLULAR
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                                                                                                Craniata; Vertebrata;
Sciurognathi; Muridae
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                                                                                                    Muridae;
              receptor with
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                           Sibley
                                                                                                                                                                 RECEPTOR)
                                                                                                                Euteleostomi;
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                                                                                                   Murinae;
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                                                                                                      Rattus
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EMBL; L03202;
EMBL; S62043;
EMBL; L19656;
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DOMAIN
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PROSITE; PS50262;
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InterPro; IPR002232; -.
Pfam; PF00001; 7tm_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                              GCRDb; GCR_0719; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
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SEQUENCE
                                                                       CONFLICT
                                                                                   CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruat M., Traiffort
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                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: THIS IS ONE OF THE SEVERAL DIFFERENT RECEPTORS FOR 5-HYDROXYTRYPTAMINE (SEROTONIN), A BIOGENIC HORNONE THAT FUNCTION AS A NEUROTRANSMITTER, A HORNONE, AND A MITOGEN. THE ACTIVITY OF THIS RECEPTOR IS MEDIATED BY G PROTEINS THAT STIMULATES ADDRALATE CYCLLASE. IT HAS A HIGH AFFINITY FOR TRICYCLIC PSYCHOTROPIC DRUGS. SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. THE CENTRAL MERVOUS SYSTEM, PREDOMINANTLY IN THE CORPUS STRIATUM BUT ALSO IN VARIOUS SYSTEM, PREDOMINANTLY IN THE CORPUS STRIATUM BUT ALSO IN VARIOUS LIMBIC AND CORTICAL REGIONS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fharmacol. 43:320-327(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       European Bioinformatics Institute. The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            runction: THIS IS
                                                                                                                                                                                                                                                                                                                             PS00237; G_PROTEIN_RECEP_F1_1; PS50262; G_PROTEIN_RECEP_F1_2;
                                                                                                                                                                                                                                                                                                       tamily.
                                                                                                                                                                                                                                                                                                                   coupled receptor;
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Schwartz J.-C.
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; AAB26908.1; -.
; AAA40611.1; -.
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  W.
                                                                                                                                                                                                                                                                                                                  Transmembrane; Glycoprotein;
                                                                                                                                                                                                                                                       1 (POTENTIAL CYTOPLASMIC 2 (POTENTIAL
                                                                                                                                                        EXTRACELLULAR (POTENTIAL)
5 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
6 (POTENTIAL).
                                   SLSQTLWSLRYGRIHSVPP -> HASTVPRSTGQPCLPLHV DLSQRCQTRPQLQQVLALPLPPNSDSDSASGGTSGLQLTAQ
                                                          L -> V (IN REF. 1).
PCVHCPPEHRPALPPPPCGPLTAVPDQASACSRCCLCLCRQ
TQIQTPLQGAPRACSSQPSFCCLERPPGTPRHPPGPPLWST
                                                                                                                      7 (POTENTIAL).
CYTOPLASMIC (POTENTIAL)
                                                                                                                                   EXTRACELLULAR (POTENTIAL).
7 (POTENTIAL).
                                                                                                                                                                                                        CYTOPLASMIC 4 (POTENTIAL
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                                                                                              BY SIMILARITY.
                                                                                                        N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                EXTRACELLULAR (POTENTIAL).
3 (POTENTIAL).
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                       LLLPGEATRDPPPPTRATTVVNFFVTDSVEPEIRPHPLSSP
  6BC00F6A3CBA5FB4 CRC64
                                                                                                                                                                                                         (POTENTIAL)
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            (IN REF.
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PML1_HUMAN
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Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                    Maw M.A., COLLEBRIDGES R.J., Kumaraman Bridges R.J., Huttner W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Leary A.G. "AC133, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2000 (Rel. 01-OCT-2000 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PML1_HUMAN
043490;
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"A novel five-transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2000
                                                        between
                                                                        This
                                                                                                                                                                                                                                                                                                                                       degeneration.";
Hum. Mol. Genet.
                                                                                                                                                                                                                                                                                                                                                                  "A frameshift mutation in
                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=20056119;
                                                                                                                                                                                                                                                                                                                                                                                                                                           DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Blood 90:5002-5012(1997).
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Leary A.G., Olweus J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Fetal liver;
MEDLINE=98052558; P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHARACTERIZATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Blood 90:5013-5021(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Miraglia S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=98052559;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND SEQUENCE OF 31-
TISSUE-Fetal liver, AND Retinoblastoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
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les 15; Conserv
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                                                                                                                                                                                                                           TISSUE SPECIFICITY: SELECTIVELY EXPRESSED ON CD34 HEMATOPOLE: STEM AND PROGENITOR CELLS IN ADULT AND FETAL BONE MARROW, FET LIVER, CORD BLOOD AND ADULT PERIPHERAL BLOOD. NOT DETECTED ON OTHER BLOOD CELLS. ALSO EXPRESSED IN A NUMBER OF NONLYMPHOID TISSUES INCLUDING RETINA, PANCREAS, PLACENTA, KIDNEY, LIVER, BRAIN AND HEART.
                                                                                                             PIM: GLYCOSYLATED.

PIM: GLYCOSYLATED.

DISEASE: DEFECTS IN PROMLI ARE THE CAUSE OF AN AUTOSOMAL RECESSIVE DISEASE: DEFECTS IN PROMLI ARE THE CAUSE OF Y NIGHT BLINDNESS AND FORM OF REFINAL DEGENERATION CHILDHOOD WITH PROGRESSION TO PROFOUND VISUAL IMPAIRMENT AND EXTINGUISHED ELECTRORETINOGRAMS BY THE THIRD DECADE. A SINGLE NUCLEOTIDE DELETION YIELDS A TRUNCATED PROTEIN LACKING HALF OF THE SECOND EXTRACELLULAR LOOP, THE FINAL MEMBRANE-SPANNING DOMAIN AND THE CYTOPLASMIC C-TERMINUS.
ween the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are no reby non-profit institutions as long as its contentified and this statement is not removed. Usage by ities requires a license agreement (See http://www.is
                                                                                                  SIMILARITY: BELONGS TO THE PROMININ FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PLQGAPRACSSQPSFCCLERPPGTPRHPPGPP----LWSTSLS
                                                                       SWISS-PROT entry is copyright. It is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a novel marker for human hematopoietic stem and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ., Godfrey W., Yin A.H.,
Waller E.K., Buck D.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               characterization,
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                                                                                                                                                                                                                                                                                                                                                                                119; PubMed=10587575;
beil D., Koch J., Hellwig A., V
Kumaramanickavel G., John S.,
Huttner W.B., Denton M.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                       9:27-34(2000)
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a S., Zanjani E.D.,
s J., Kearney J., B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=9389721;
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Last annotation update)
1 precursor (ANTIGEN AC133).
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Pred. No. 9.4;
3; Mismatches
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- outstation
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CARBOHYD
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DOMAIN
TISSUE-Kidney;

MEDLINE-98024147; PubMed-9356465;

Weigmann A., Corbeil D., Hellwig A., Huttner W.B.;

"Prominin, a novel microvilli-specific polytopic membrane the apical surface of epithelial cells, is targeted to pla protrusions of non-epithelial cells.";

Proc. Natl. Acad. Sci. U.S.A. 94:12425-12430(1997).
                                                                                                                                                           PROM....
Mus musculus (Mouse).
Mus musculus (Mouse).
Metazoa; Chordata;
Metazia; Rodentia;
                                                                                                                                                                                                               PROM_MOUSE STANDARD; PRT; 867 AA. 054990; 035408; 01-0CT-2000 (Rel. 40, Created) 01-0CT-2000 (Rel. 40, Last sequence update) 01-0CT-2000 (Rel. 40, Last annotation update) PROMININ PRECURSOR (ANTIGEN AC133 HOMOLOG).
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Miraglia S.,
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                                                                                                       Miraglia S., Godfrey Submitted (DEC-1997)
                                                                                                                                                          Mammalia; Eutheria;
NCBI_TaxID=10090;
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                                                                                   SEQUENCE FROM N.A.
                                                                                                                                       SEQUENCE FROM N.A.
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284 5
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CYTOPLASMIC (POTENTIAL).

N-LINKED (GLCNAC...) (POTENTIAL).
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A -> S.
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A -> G.
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-> D (IN AA SEQUENCE).
-> R (IN AA SEQUENCE).
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DOMAIN
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133 MCRCCNK--CGGEMHQRQK 149
                     11 ICOCCNKGDCGTPSHSRRQ
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TISSUE SPECIFICITY: IN THE EMBRYO, EXPRESSED ON THE APICAL SIDE OF NEUROEPITHELIAL CELLS AND OF OTHER EPITHELIA SUCH AS LUNG BUDS, GUT AND URETHER BUDS. IN THE ADULT, EXPRESSED AT THE APICAL SIDE OF THE KIDNEY TUBULES AND OF THE EPENDYMAL LAYER OF THE BRAIN. NOT EXPRESSED IN GUT, LIVER, LUNG, PITUITARY, ADRENAL, HEART OR SPLEEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO THE PROMININ FAMILY.
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                                             Similarity 47.49; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          Transmembrane;
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435
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AAB86715.1; -.
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N-LINKED (CLNAC...
S -> N (IN REF. 2).
K -> N (IN REF. 2).
K -> N (IN REF. 2).
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P -> L (IN REF. 2).
G -> D (IN REF. 2).
G -> D (IN REF. 2).
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                                             Score 55; DB Pred. No. 19; 4; Mismatches
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POTENTIAL.
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                                             Gaps
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Search completed: July 12, 2001, 08:27:09 Job time: 179 sec

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Maximum
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Match
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1: sp_archea:*
2: sp_bacteria
3: sp_fungi:*
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Gapop 10.0 , Gapext 0.5
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242
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        Q9pe89 xylella fas
Q9qe89 xylella fas
Q9dg37 pimephales
Q95478 streptomyce
Q20778 caenorhabdi
Q9pki4 chlamydia m
Q9plg6 homo sapien
Q9plg6 homo sapien
Q9fyv3 saccharum o
Q08463 rattus norv
Q70421 mus musculu
                                                                                                    Q12903 homo sapien p97708 rattus norv operio microtus br Q91675 xenopus lae p91728 xenopus lae p79762 gallus gall O9pwf8 gallus gall O77685 trichosurus 073670 coturnix co
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homo sapien
 RESULT
P97708
ID P9
AC P9
DT 01
DT 01
DT 01
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| Db Db | SOR DR RT R R R R R R R R R R R R R R R R | RN OCC OCC DET DE | • |
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| Best Loc Matches 7 1 | SEE SEE | RESULT 012903 AC 01290 AC 01290 DT 01-NN DT 01-NN DT 01-NN DT 01-NN DE POM OS Homo OC Euka: OX NCBLI RN [1] | 444448333333322222222222222222222222222 |
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| imilarity ; Conserva VQGPADICQCC :: VEGPADICQCC | · BOOK HB · | 33 PRELIMINARY, 3; 7-1996 (Tremburel. W-1996 (Tremburel. X-2000 (Tremburel. 23. 23. 24. 25. 25. 26. 27. 27. 27. 27. 27. 27. 27. 27. 27. 27 | 22222222222222222222222222222222222222 |
| y 87.8 rvative QCCNKGDC | க்கில் வக்டிக் | | 2 2 344 435 435 435 435 435 435 435 435 435 |
| GTE | -778 | 01, 01, 13, 13, | 165411456662111221124 1654114566621113211131 |
| al Similarity 87.8%; Pred. No. 3.6e-22 36; Conservative 2; Mismatches SWFPVGGPADICQCCNKGDCGTPSHSRRQPHVMSQWSRSVS : | 61 tg7 | PRT Creat Last Last ; Cra | Q9UP38 Q9EU76 Q9EU76 Q9EEP9 Q94588 Q9J149 Q9J149 Q9J19M5 Q9J19M5 Q9J19M5 Q9G0473 Q9G0473 Q9G0473 Q9G0473 Q9G056 Q97601 Q9 |
| ; 3; 41 186 | Modi W.S., De | AA. update) on update) ertebrata; Hominidae; | ENTS |
| ls 0; | zp3 and a POM12 | Euteleostomi; | Q9up38 homo saj 054788* mus mus Q9puj6 carass Q9zrp9 malus; Q44588 alcaligy Q9j149 rattus Q9j165 vaecin Q92027 cyprin; Q919m5 xenopu Q60473 cavia; Q97602 oryctol. Q97600 oryctol. Q97601 oryctol. Q97601 oryctol. Q97602 oryctol. Q97603 oryctol. Q97604 halofer 057328 gallus Q94497 drosoph 060521 homo sa Q9v497 drosoph |
| Gaps 0; | 121 | | homo sapien 'mus musculu carassius a malus domes alcaligenes rattus norv vaccinia vi cyprinus ca xenopus lae cavia porce streptomyce oryctolagus oryct |

P97708 PRELIMINARY; PRT; 424 AA. P97708, 055084; 055084; 01-NOV-1998 (TIEMBLIRE1. 08, Created) 01-NOV-1998 (TIEMBLIRE1. 16, Last annotation update) 01-MAR-2001 (TIEMBLIRE1. 16, Last annotation update)

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RESULT
Q9ERIO
ID Q9
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DT 01
DT 01
DT 01
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Best Local :
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                       Q9ERIO;
01-MAR-2001
01-MAR-2001
01-MAR-2001
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CARBOHYD
CARBOHYD
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                               TRANSMEM DOMAIN
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
ZONA PELLUCIDA 3 GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY).

SIMILARITY: CONTAINS A ZP DOMAIN, WHICH IN ZPZ, ZP3, GP2, TGER-3 AND UROMODULIN.

EMBL; Y10823; CAA71787.1; -.

EMBL; D78482; BAA24456.1; -.
                                                              Q9ERI0
                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00100; zona_pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; FALSE_NEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-WISTAR; TISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                            DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                      Glycoprotein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR
(ZONA PELLUCIDA GLYCOPROTEIN ZP3) (ZONA PELLUCIDA GLYCOPROTEIN 3).
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                                                                                                             SWLPVEGDADICDCCSNGNCSNSSSSEFETHEPAQWSTLVS
Ĺ
                                                                                                                                                               Similarity
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                                                                                                                                                                                                     388
409
45
329
1146
273
304
327
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55
1112
424
1
                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                       Signal; Sulfatation; Sperm; Receptor; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-OVARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L.E., Aitken R.J.;
Abstr. Ser. 18:86-86(1996).
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424
308
334
146
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304
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424
387
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N-LINKED (GLCNAC...
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N-LINKED (GLCNAC...
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V-> A (IN REF. 2).
N-> S (IN REF. 2).
N-> M (IN REF. 2).
                                                                                                                                                   Score 125; DB 11;
Pred. No. 2.6e-09;
5; Mismatches 15,
                                                                                                                                                                                                                                                                                           ZP.
POLY-SER.
                                                                                                                                                                                                                                                                                                                CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                        EXTRACELLULAR (POTENTIAL).
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
ZONA PELLUCIDA SPERM-BINDING
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Sciurognathi; Muridae;
                                                             PRT;
                                                                                                                                                                                                      2AB42CBB14DE8701
                                                             418
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                     update)
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(POTENTIAL).
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                                                                                                                                                                        424;
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RESULT
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Matches 19
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Best Local
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                                                                                                                           Q91728
Q91728;
Q1-NOV-1996
Q1-JAN-1998
Q1-MAR-2001
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O91675; O1-NOV-1996 (TrEMBLrel. 01, Created)
O1-FEB-1997 (TrEMBLrel. 02, Last sequence update)
O1-MAR-2001 (TrEMBLrel. 16, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hedrick J.L., Yang J.C.;
Submitted (JAN-1996) to the EMBL/
EMBL; U44952; AAB39079.1; -.
Interpro; IPR001507; -.
Pfam; PF00100; zona_pellucida; 1.
Eukaryota; Metazoa; (
Amphibia; Batrachia;
                                                             Xenopus laevis (African clawed frog)
                                                                                                   GP43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00241; ZP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XLZPC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=OVARY;
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Microtus brandti.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xenopus laevis (African clawed frog)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=137787;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                    330
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17; Conserv
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19; Conserv
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GTTEMBLTel.
(TTEMBLTel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLYCOPROTEIN PRECURSOR.
                                  Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49589
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47.5%;
44.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41.5%;
46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to the EMBL/GenBank/DDBJ
   Anura;
                                                                                                                                 01,
05,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
   Mesobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                 Last sequence update)
Last annotation updat
                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.

ZONA PELLUCIDA C GLYCOPROTEIN

; A8DB9A5B978E5197 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 115; DB 1
Pred. No. 6e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 100.5; DB 1 Pred. No. 6.2e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhu C.,
of zona
                                  Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Arvicolinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                   460
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pellucida
                                     Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                   A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13;
Pipoidea;
                                                                                                                                 update)
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cDNA 1
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                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
   Pipidae;
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FESULT
C9PWF8
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Best Local S
Matches 16
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
    Q9PWF8;
Q9PWF8;
01-MAY-2000
01-MAY-2000
01-MAR<sub>$</sub>2001
                                                                                                                                                                                                                                                                                                                                                                                                         "A 42-kDa glycoprotein from chicken egg-envelope, an avian homolog of the ZPC family glycoproteins in mammalian zona pellucida. Its first identification, cDNA cloning and granulosa cell-specific expression."; Eur. J. Biochem. 260:736-742(1999).
EMBL; D89097; BAA13760.2; -.
InterPro; IPR001179; -.
InterPro; IPR001179; -.
Pfam; PF00100; zona_pellucida; 1.
PROSITE; PS00433; FKBP_PPIASE_1; UNKNOWN_1.
PROSITE; PS00433; FKBP_PPIASE_1; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-OVARIES FROM HCG-TREATED FEMALES;
MEDLINE-98013448; PubMed-9352194;
Kubo H., Kawano T., Tsubuki S., Kawashima S., Katagiri C., Suzu Rubo H., Kawano T., Tsubuki S., Kawashima S., Katagiri C., Suzu Rubo H., Kawano T., Tsubuki S., Kawashima S., Katagiri C., Suzu Rubo H., Kawano T., Tsubuki S., Kawashima S., Katagiri C., Suzu Rubo H., Kawano T., Tsubuki S., Kawashima S., Katagiri C., Suzu Rubo H., Suzu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE=99203469; PubMed=10103002;
Takeuchi Y., Nishimura K., Aoki N., Adachi T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR001507; -. pfam; pF00100; zona_pellucida; SMART; SM00241; ZP; 1. SEQUENCE 460 AA; 50084 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAY-1997
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P79762;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matsuda T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9031;
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NCBI_TaxID=8355;
                                                                                                                                                                                                                330
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                                                                                                                                                                                                                                                        1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQW
                                                                                                                                              7
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                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                            Similarity
       (TrEMBLrel. 13, (TrEMBLrel. 13, (TrEMBLrel. 16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TremBirel. 03, Created)
(TremBirel. 13, Last seq
(TremBirel. 14, Last ann
                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi;
Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                         40.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41.5%;
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Created)
Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                    Score 98.5; DB 13;
Pred. No. 1.1e-05;
7; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 100.5; DB 13;
Pred. No. 6.3e-06;
9; Mismatches 10;
                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3798F3E3394FDF34 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sato C.,
                                                                                                                                                                                                                                                                                                                                              Length
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p41, is a
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RESULT
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                                                                                                                                            Query Match
Best Local 9
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Gallus gallus zona pellucida C protein gene.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ da
EMBL; AB031033; BAA83418.1; -.
InterPro; IPR001179; -.
InterPro; IPR001507; -.
Pfam; PF00100; zona_pellucida; 1.
PFANTS; PF00023; ZPELLUCIDA.
PROSITE; PS00423; FKBP_PPIASE_1; UNKNOWN_1.
SMART; SM00241; ZP; 1.
SMART; SM00241; ZP; 1.
SEQUENCE 446 AA; 47670 MW; DC5409532C22F03C
                                                                                                                                                                                                                                                                                                        McCartney C.A., Mate K.E.; "Cloning and characterization of a zona pellucida 3 cDNA "Cloning and characterization of a zona pellucida 3 cDNA marsupial, the brushtail possum Trichosurus vulpecula.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZONA PELLUCIDA C PROTEIN.
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                       Pfam; PF00100; zona_pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00453; FKBP_PPIASE_1; UNKNOWN_1
                                                                                                                                                                                                                                                               EMBL; AF079524; AAC28736.1; InterPro; IPR001179; -. InterPro; IPR001507; -.
                                                                                                                                                                                                                                                                                                                                                                                                 Trichosurus vulpecula (Brush-tailed possum).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Metatheria; Diprotodontia; Phalangeridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1998 (TREMBLIGEL 08, 01-NOV-1998 (TREMBLIGEL 08, 01-MAR-2001 (TREMBLIGEL 16,
                                                                                                                                                                                                 SMART; SM00241; ZP; SEQUENCE 422 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       077685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-LIVER;
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZONA PELLUCIDA 3 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          077685;
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                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9337;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      330 TWVPVEGSRDVCNCCETGNCEPPALSRRL-NPMERW 364
                                                                              314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 SWFPVQGPADICQCCNKGDCGTPSHSRRQPHVMSQW 36
                                                                                                     2 WFPVQGPADICQCCNKGDCGTPSHSRRQ 29
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                                                                              WLPVEGPRDICSCCQTGTCISLSSSRKR
                                                                                                                                 . Similarity 53.(
15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                  45714 MW;
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                                                                                                                                             39.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence update)
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                                                                                                                                 Score 95; DB
Pred. No. 3.3e
4; Mismatches
                                                                                                                                 4;
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Pred. No. 1.1e-05;
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                                                                                                                                                                                                  58BA61A92F82612A CRC64;
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                                                                              341
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                                                                                                                                            DB 6;
3.3e-05;
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                                                                                                                                                         Length 422;
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Trichosurus.
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073670 073670;

PRELIMINARY;

PRT;

446 AA

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RESULT
Q9PE89
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RX MEDLINE-20355717; PubMed=10910347;
RX MEDLINE-20355717; PubMed=10910347;
RA Alvarenga R., Alves L.M.C., Araya J.E., Baia G.S., Baptista C.S.,
RA Alvarenga R., Alves L.M.C., Araya J.E., Baia G.S., Baptista C.S.,
RA Alvarenga R., Alves L.M.C., Araya J.E., Baia G.S., Baptista C.S.,
RA Alvarenga R., Alves L.M.C., Araya J.E., Bave J.M., Briones M.R.S.,
RA Colauto N.B., Colombo C., Costa F.F., Costa M.C.R., Costa-Neto C.M.,
RA Coutinho L.L., Cristofani M., Dias Neto E., Docena C., El Dorry H.,
RA Facincani A.P., Ferreira A.J.S., Ferreira V.C.A., Ferro J.A.,
RA Fraga J.S., Franca S.C., Franco M.C., Frohme M., Furlan L.R.,
RA Fraga J.S., Franca S.C., Franco M.C., Frohme M., Furlan L.R.,
RA Krieger J.E., Kuramae E.E., Laigret F., Lambais M.R., Leite L.C.C.,
RA Krieger J.E., Kuramae E.E., Laigret F., Lambais M.R., Leite L.C.C.,
RA Macques M.V., Martins E.A.L., Martins E.M.F., Martino C.L.,
RA Marques M.V., Martins E.A.L., Martins E.M.F., Matsukuma A.Y.,
RA Marques M.V., Martins E.A.L., Martins E.M.F., Monteiro-Vitorello C.B.,
RA Moon D.H., Nagai M.A., Nascimento A.L.T.O., Netto L.E.S.,
RA Menck C.F.M., Miracca E.C., Miyaki C.Y., Monteiro-Vitorello C.B.,
RA Menck C.F.M., Martins E.A.L., Martins E.M.F., Oliveira M.A.,
RA Menck C.F.M., Margai M.A., Nascimento A.L.T.O., Netto L.E.S.,
RA Menck C.F.M., Pereira G.A.G., Pereira H.A. J., Persis A.,
Peixoto B.R., Pereira G.A.G., Pereira H.A. J., Persis A.,
Guaggio R.B., Roberto P.G., Rodrigues V., de Rosa A.J.M.,
RA Gensa V.E. Jr., de Sar R.G., Santelli R.V., Sawasaki H.E.,
RA de Silve A.C.R., da Silve A.M., da Silva F.R., Silva M.A., Jr.,
RA de Souza A.P., Terenzi M.F., Truffi D., Tsai S.M., Tsuhako M.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
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Submitted (MAR-1998) to the EMBL/GenBank/DDBJ
EMBL; AB012606; BAA25637.1; -.
InterPro; IPR001179; -.
InterPro; IPR001507; -.
Pfam; PP00100; zona_pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00023; FKBP_PDIASE_1; UNKNOWN_1.
SMART; SMO0241; ZP; 1.
SMART; SMO0241; ZP; 1.
SMART; SMO0241; ZP; 1.
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Coturnix coturnix japonica (Japanese quail).
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vert
Eukaryota; Meognathae; Galliformes;
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01-AUG-1998 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
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37.8%;
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Last annotation update)
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EMBL/GenBank/DDBJ dai
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           subdivision;
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nes; Phasianidae; Phasianinae;
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RESULT
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Best Local Similarity 27.0
Matches 11; Conservative
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Best Local :
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Q9DG37;
Q1-MAR-2001
01-MAR-2001
01-MAR-2001
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REMBL, AE003949; AAF83949.1; -.
                                                                                                                                                                                         005478;
                                                                                                                                                                                                                                                                                                                                                           NON_TER
SEQUENCE
Servin-Gonzalez L.; "Cloning, character of an extracellular
                                                                                                                                                                                                                                                                                                                                                                               Morris C.A., Thomas-Jones R.E., Cryer J., Wood "Identification of the ZP3 cDNA sequence from exposed to diethylstilbestrol."; Submitted (OCT-1999) to the EMBL/GenBank/DDBJ EMBL; AF192407; AAG28398.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pimephales promelas.
Eukaryota; Metazoa; Chordata; Craniata;
Actinopterygii; Neopterygii; Teleostei;
Cypriniformes; Cyprinidae; Leuciscinae;
NCBI_TaxID=90988;
                                                                                                Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces
                                                                                                                                                        01-JUL-1997 (TrEMBLrel.
01-JUL-1997 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical
SEQUENCE 99
                               MEDLINE=93138418; PubMed=8422993; Perez C., Juarez K., Garcia-Castells E.,
                                                       STRAIN-M1
                                                                SEQUENCE
                                                                                     Actinomycetales; Streptomycineae; NCBI_TaxID=1931;
                                                                                                                      Streptomyces sp
                                                                                                                                   LIPR.
                                                                                                                                              LIPA TRANSCRIPTIONAL
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  extracellular
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                                                                  FROM N.A.
           characterization,
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99 AA; 11
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3 (FRAGMENT).
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Euteleostei;
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  lividans 66 sp. M11.";
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ACCOMUNICATION OF THE PROPERTY OF THE PROPERTY
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01-NOV-1996
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wilson R., Ainscough R., Anderson K., Baynes C., Berks M.,
Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,
Gardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston L.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Lightning J., Lloyd C., Mcmurray A., Mortimore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen J
Smaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,
Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K., Waterston R.,
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; M86351; AAB51446.1; -.
InterPro; IPR000792; -.
Pfam; PF00196; GerE; 1.
SMART; SM00421; HTM_LUXR; 1.
DNA-binding; Transcription regulation.
DNA-binding; Transcription regulation.
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Submitted (APR-1997) to
-i-SIMILARITY: BELONGS
                                                                         Submitted (AUG-1994) to t.
EMBL; U12966; AAA20613.1;
InterPro; IPR000087; -.
InterPro; IPR002486; -.
                                                                                                                                                                                                                                                                                                                                          STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
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MEDLINE-94150718; PubMed=7906398;
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Pfam; PF01391; Collagen; 2.
Pfam; PF01484; Col_cuticle_N; 1.
SEQUENCE 1120 AA; 119368 MW;
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                                                                                                                                                                                     Waterston R.;
                                                                                                                                                                                                           STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                         Submitted (NOV-1994)
                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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(TIEMBLrel. 01, Last sequence update)
(TIEMBLrel. 15, Last annotation updat
TRIPLE HELICAL REGION OF COLLAGENS.
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                                                                                                                                                             EMBL/GenBank/DDBJ
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Pred. No. 4
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5; Mismatches
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  17764D8C4B88BCCD CRC64;
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RESULT
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01-OCT-2000
01-OCT-2000
TISSUE-LIVER;
Zhang C., Yu Y., Zhang S., Wei H., Zhou G., Oùyang S., Luc Liu M., He F.;
Liu M., He F.;
"Functional prediction of the coding sequences of 121 new deduced by analysis of cDNA clones from human fetal liver. Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                    Ol-vo.
PRO1787.
Homo sapiens (Human).
Homo sapiens (Human).
Homo sapiens (Human).
Homo sapiens (Human).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            White O., Hickey E.K., Peterson J., Utterback T., Berry K., Bass Linher K., Weidman J., Khouri H., Craven B., Bowman C., Dodson R. Gwinn M., Nelson W., DeBoy R., Kolonay J., McClarty G., Salzberg
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Pfam; PF00133; tRNA-SYNTL1; 1.

PRINTS; PR00985; TRNA-SYNTHLEU.

PROSITE; PS00178; AA_TRNA_LIGASE_I; UNKNOWN_1.

SEQUENCE 819 AA; 93014 MW; 024D7E1BDZE900B4
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01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bacteria; Chlamydiales; NCBI_TaxID=83560;
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                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                 NCBI_TaxID=9606;
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13; Conserv
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11; Conservative
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Last annotation update)
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Pred. No. 1:
                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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S.L.,
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rearch completed: July 12, 2001, 08:26:53
Tob time: 163 sec
                                                                                                                                                          Query Match 23.1%; Score 56; DB 4; Length 122; Best Local Similarity 36.6%; Pred. No. 2.4; Matches 15; Conservative 6; Mismatches 8; Indels
                                                                                                                                                                                                                                                       EMBL; AF116668; AAF71088.1; -.
SEQUENCE 122 AA; 13695 MW; B428ED1274CE81CD CRC64;
                                                                                      8; Indels 12; Gaps
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